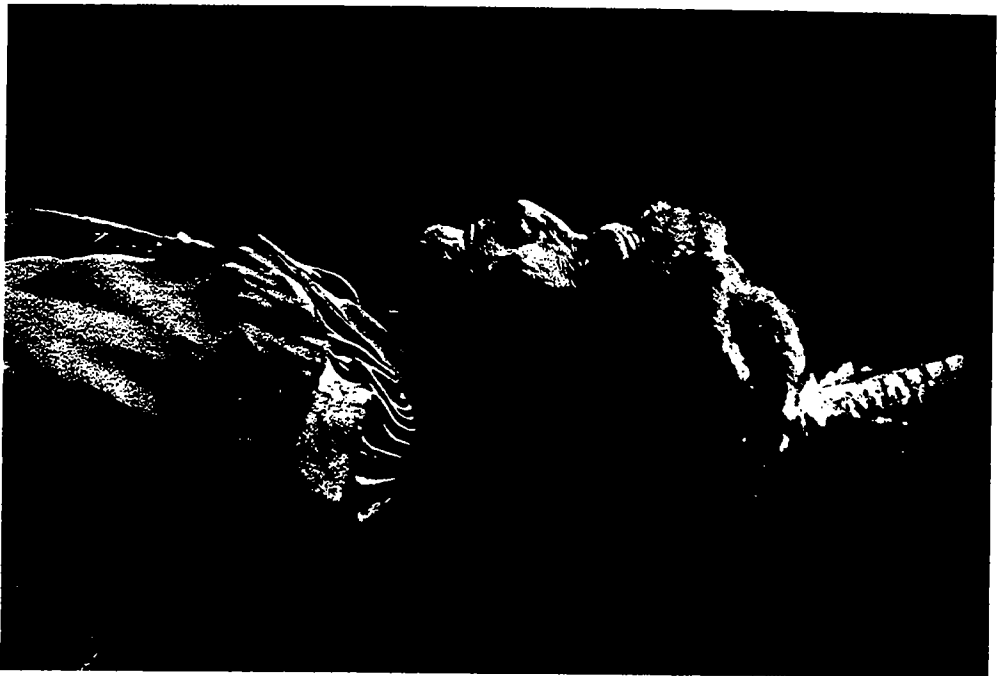


Exhibit 4

PENOBSCOT MAN
THE LIFE HISTORY OF A FOREST TRIBE IN MAINE

by Frank G. Speck

The original 1940 University of Pennsylvania edition
with a new preface by David Sanger
and 30 additional photographs



Newell Lion



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seems that we shall have to await more complete investigation of all the constituent tribes and neighboring Algonkian.

The Penobscot, and we may also include the related Algonkian of the northeast, present a uniform type of culture, the material side of which is practically shared by tribes of the Canadian area from the Great Lakes to the Atlantic. In subjective matters, more individuality, though equally simplified, appears for instance in the specialization of art motives, wood carvings, hunting groups, and the limited range of fundamental religious ideas and rites. Located in a geographical corner, the Wabanaki tribes had little or no influence upon their neighbors, but have shown only lately some receptivity in adopting from outside new activities and institutions where practical in their mode of life. What there remains of local distinctiveness in the life of the northeastern group has evidently developed out of the comparative isolation of their habitat, away from paths of culture transmission.

Again, with the Algonkian north of the St. Lawrence, the Penobscot present close similarities both in positive and negative respects; particularly noteworthy in social organization, religion, decorative art, shamanism, artifacts, and economic forms. To be more precise, the differences between the Wabanaki and the Labradorean group are greater than those that prevail between the tribes within the Wabanaki group itself. The Labrador Algonkian, to be sure, present a greater simplicity of culture than their Cree and Ojibwa relatives from whom they have supposedly branched off. Here also they present a problem quite analogous to that of the Wabanaki and Penobscot in their supposed contact with coastwise predecessors. Can it be that both groups have had similar historical experiences and have undergone similar mixing processes in migrating eastward from earlier seats of the Algonkian?

In presenting these discussions I am more anxious to offer suggestions to those interested in the ethnological problems of the Eastern Algonkian than to lay down theories prematurely.

VILLAGES

The three present villages of the Penobscot are believed to rest upon old sites. Other locations on the lower river and

bay are also spoken of, but no opportunity has occurred to determine their location definitely beyond the archaeological surveys projected during past years. The present villages, which represent the only permanent locations of the tribe, are as follows:

(1) *Panawa'bskik* is the oldest known center of the tribe, from which it takes its name. Various translations of the term have appeared, but the most satisfactory are "At the rocks," or "The white rocks place," and "Where the river broadens out."²³ These and other names of places, however, are archaic, and translators do not agree among themselves. This village is on Indian Island opposite Oldtown. In colonial times there was a palisaded village here, and the first Catholic mission was also founded at the same place. The population in 1914 was something over four hundred including Indians of other Wabanaki tribes. All of the villages are prettily situated on rather high land, preferably at the southern ends of the islands in the river. Both the settlements at Olemon and Lincoln are, however, on the eastern side of the island, surrounded by clearings.

(2) *Welama'nesuk*, (English form Olemon), is some twelve miles up the river above the first-mentioned village. This settlement is on the eastern shore of an island, the population being limited to four or five families. It is so named from the fact that in the olden times they used to obtain there supplies of red ochre for paint. (3) *Matna'gak*, "Long Island," the most northerly permanent settlement, is located also on a large island about thirty-six miles above Oldtown, opposite Lincoln. There were seven families here in 1912. This location has become unpopular in recent years, because the Indians consider it to be too far from civilization. It is two days' journey up the river from Oldtown by canoe, and the descent to it from the nearest town upstream requires one day. In their material life the people of this island are somewhat more conservative than their relatives nearer civilization,

²³ *Pena'ps* meaning "rock,"—*kik* locative. The element *wab* "white" possibly being included. The Indians, some of them Malécite, vary considerably in their interpretations. Among numerous essays which discuss the etymology of this proper name may be mentioned, J. E. Godfrey, "The Ancient Penobscot or Panawanskik," *Historical Magazine*, Feb. 1872, Vol. 1, No. 11, New Ser. pp. 85-92.

though many pass back and forth either bound northward on hunting trips or returning to Oldtown for social reunions. In former times *Matnagak* was much exposed to the attacks of the Mohawks, and many war incidents center round about it. Other large camps, possibly villages, are known to have been situated on the Penobscot river at the south of the Mattawamkeag river, that of the Passadumkeag, and at Castine on the eastern shore of Penobscot Bay.

The former settlements and more important camps of the tribe, beginning at the bay and going northward are, as well as can now be remembered, *E'sik*, "Clam place," Stockton; *Madji'bigwa'dos*, "Bad supply of game," Castine; *Kade'skik*, "Place of overgrown eels," Oldtown; *Paske'tagwe'suk*, Piscataquis, *Pesado'm'kik*, "Sand bar point place," Passadumkeag; *Madawa'm'ikik*, "Where the current makes a sand bar at the mouth of the stream," Mattawamkeag; and *Tcimski'taguk*, "Big dead-water," Kingman. The settlement at Castine is mentioned in history under the name of Penobscot or (*Panawa'mpskik*), from which was derived Pentagouet, a former tribal synonym.

Within this stretch of country the Penobscot used to divide their time somewhat regularly, spending the summer months (June, July, August) in the lower coast or salt-water region, then ascending the river to the family hunting territories for the fall hunting (October, November, December), and finally returning to the tribal rendezvous at the main headquarters at Oldtown for the dead of winter (January, February, March). The early spring months (April, May) were spent in drifting down toward the ocean and hunting through the neighboring streams and in the main river for eels. This, it should be understood, is only a general outline of the movements of the people; many of them would spend longer periods in the interior, while some "lazy" families would remain most of the time at salt water, gaining an easy though monotonous living from the sea. Particular designations of the seasons and months in this connection will appear under the topic Division of Time.

II MATERIAL LIFE

SHELTER

THE dwellings of the Penobscot were of several major and minor types, only one at all permanent, composed of birch bark (occasionally elm, evergreen, hemlock, or spruce bark) coverings and supporting poles. The usual dwelling was (I) the conical birch-bark wigwam, *wi'gwom*, "camp (habitation)" also *bada'gwigan*, "round habitation." Its correspondent, destined more particularly for winter use, having a log understructure (II), is called *dagwa'kswi-gamik*, "autumn, or finished, habitation," because it was built in the fall to serve through the wintertime. A circular or ovate, rounded-top camp (III) was also known, its covering elm or evergreen bark sheets, and another (IV) flat-topped lean-to, *aba'gikan*, "flat habitation," besides a form of the conical wigwam for transient occupancy (V) with a covering of spruce, balsam, or hemlock boughs entire laid over the poles, and known as *wulge'ski-gan*, "hemlock habitation," or *sidi'kan*, "bough house."

Descriptions of these house-types follow, arranged from studies by Mr. Orchard, whose published notes¹ together with the observations given by Mrs. Eckstorm in her paper² I have combined with notes that I made on camp construction. Native house-types have been a thing of the past here for three generations; hence their description rests upon tradition and memory; my reasons for presenting it in a condensed abstract.

(I) Conical shelter; approximately eight to ten feet in height at peak and ten in diameter at ground, framework of nine, sometimes ten, peeled cedar or spruce poles supporting bark cover, another series of poles or unpeeled lengths placed outside over bark to hold it in position. Supporting or foundation poles, two inches in

¹ W. C. Orchard, "Penobscot Houses," *American Anthropologist*, Vol. 11, no. 4, 1909, pp. 601-6.

² Eckstorm, 1, pp. 65-7.

To stiffen the forearm with a slight forward motion and upturn of the clenched fist while the arm appears to be hanging innocently at the side, is a signal used by a man to attract a woman's attention to his sexual desires. A variation of the same is to grasp the biceps of the signaling arm with the other hand.

Similarly a man may toss a chip, a pebble, or something within reach, so that it will fall near the girl or woman to whom he means to make a request. Should the woman pick up the object it is a sign of consent.

To thrust the hand toward a person palm downward, with the index-finger and second-finger knuckles spread apart, is a sign of insult, called "*teasci'*." A downward and outward sweep of the hand serves the same purpose.

Like Indians of the north, the Penobscot are clever in making gestures with the lips. By protruding the lips forward or to the right or left while talking they indicate direction. The lip motions also serve admirably under circumstances where silence is required and the hands are engaged, as for instance, in a canoe when approaching game. The movements seem, however, to be involuntary, accompanied by a toss of the head.

FISHING

The Penobscot at all times depended to a large extent upon the many fish of their lakes, river, and bay for a food supply. Some of the old capturing devices are at times still employed.

Customs and beliefs connected with the killing and disposal of fish have been dealt with in my paper on religion. I might allude to the tale in which the different races of fish are traced from transformed people who, driven by thirst, rushed into the water when the Penobscot River was created by Gluskabe,¹⁹ the culture-hero.

To these Indians, practically all of whom lived near the Penobscot River, the spearing of salmon in their annual run up-stream in June, July, or August, was one of the great seasonal events. When the lightning bugs begin to appear

¹⁹ See Bibliography, F. G. Speck, 19.

late in June, they say it is the sign for salmon spearing. The Penobscot salmon sometimes attain a weight of forty pounds. During the run, just above falls or rapids, the men would occupy some ledge and spear the fish as they came by. Camps were established in such vicinities. At other times they went in canoes, the bow man with a spear watching for fish. At night a torch consisting of a green stave, split at the end to



FIG. 29
Fish Spear or
Leister

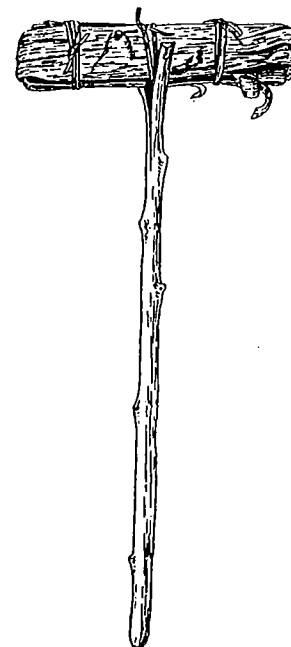


FIG. 28
Torch of Birch Bark for
Night Fishing

hold a bundle of folded birch-bark strips wound with splints and frayed at the ends (Fig. 28), was fastened in the bow of the canoe. These methods of catching salmon were practised until about 1912, when spearing was prohibited by the makers of the game laws. The fish spear or leister is nevertheless a characteristic and common implement in the Penobscot villages (Figs. 29, 30). It resembles those of northern tribes from the Atlantic to the Pacific and beyond. The shaft, from twelve to eighteen feet long, is of smoothed spruce. The outside prongs are not sharp but serve to grasp the fish so that the central prong will pierce its back. The outside prongs or grips are of hardwood, the middle point of iron nowadays, formerly a piece of sharpened hornbeam. The central tine is inserted firmly in the end of the shaft, and the



FIG. 30

- Upper left, Man Demonstrating Use of Fish Spear
 Upper right, Men in Historic Native Costume, Showing Headgear and Kilts (Malecite, St. John River, N. B.)
 Lower left, Mask of Deer Scalp Worn in Clown Dance (Man is Wearing Moose-skin Coat, 1912)
 Lower right, Hunter with Travel Equipment, Snowshoes, Basswood Hunting Bag, and Son with Splint Pack Basket

two grips are lashed to the same by splints, strips, or cording. In spears from northern tribes, the method of lashing is observed to be about the same throughout. The spear is called *e'niga'hk^w*. Torching for fish is *noda'sən'i*.

In the use of this implement, skill develops when one learns to estimate the refraction of the light in the water. But it is difficult to strike the fish squarely. When the spear is thrown from the hand it goes straight down, and after a moment's interval comes shooting up backwards from the same spot, and at the same angle as that at which it went in, permitting it to be cast again.

Just below Indian Island, above the falls, there is in the middle of the river a rocky ledge where the men used to get their stock of salmon. Unheard-of quantities were taken here by the tribe each year until the dam was built. In those days they feasted on the fresh fish and smoked a large amount of it for winter upon pole racks over a fire.

Another kind of "dart headed with like bone" was used "very cunningly to kill fish."²⁰

The fish spear (leister) was, and is yet, in general use also for getting pollock and eels. The usual method of spearing from a canoe is followed.

In the winter time, when hibernating eels have buried themselves in the mud of a cove, some families will repair thither and make camp. The men will go out on the ice, make holes through it and prod in the mud with their spears, drawing out eels in quantities. During times of scarcity of other game in the past, whole communities have had to subsist for months upon eels obtained in this manner.

When they are down the bay or river and want flounders, the Indians find some cove where they can see the fish. Then they go ashore, cut and trim a few long spruce poles. The ends are next sharpened and a notch cut in. From the canoes they stick these crude spears into the flounders and pull them up. Turtles are obtained in the same way.

The old way of taking fish, like mackerel, pollock, and others swimming in schools, was to jig them with a fairly

²⁰ Rosier, p. 372.

large-sized hook, *māgi'kan*, weighted with a stone, without bait and attached to a long line of braided basswood fibre. The hook was made from a crotch of willow about four or five inches long, its point hardened by charring. To the back of this, a long thin stone was lashed. The line of the model specimen figured is of a four-ply braid of basswood inner bark. Armed with this jigging outfit, they went among the fish and snagged them in the stomach by jerking the hook up and down in the water.

The pear-shaped stone, the so-called plummet, occurring archaeologically in Penobscot territory, is said by older men to have been used both as a slingstone and as a lure for salmon. In the latter instance it is believed to have been coated with white deer tallow as bait.²¹

The primitive hook (*māgi'kan*) and line are remembered by some, and best described by Nicolar.²² Gluskabe instructed man to take a bird's breast bone (wishbone), rub one end upon a stone to sharpen it, and attach it to a line of *wi'kabi*, basswood, and this to a pole of hardwood. Fragments of meat were then to be put upon the sharp point for bait. Gullet hooks; a sharpened bone set obliquely in a split wooden shank baited with minnow; a toggle of bone splinter. Casting hooks had tufts of deer hair or duck down for a lure for bass and pickerel. An alder sapling was the pole.

A scap-net (*kwa'phigan*, "dip-device") used for scooping fish in shallow places consists of a hoop netted with basswood cord on a handle about ten feet long. A fisherman standing on a rock over the water may net many fish as they swim by. Salmon and shad were regularly caught in this way.

For a long time the net (*ala'pi*) has been used for fishing. The shuttle used in making the nets is the same as that found throughout the Montagnais and Cree area. It is called *lapiki'gan*, "net tool," the specimen shown being made of hardwood, nine inches long and two wide. Nets are no longer home-made among the Penobscot, yet we learn that the almost world-wide "netting knot" was employed. Netting needles varied much in size, the example figured being rather a large one. Stone net-sinkers, so called by Indians

²¹ See bibliography, S. W. Pennypacker II.

²² Nicolar, p. 33.

and others, are found on Indian Island and other Penobscot sites as testimony of the early knowledge of netting.

The following quotation from Rosier speaks for itself: "Towards night our Capitaine went on shore to have a draft with the Seine or net. And we carried two of them (natives) with us who marvelled to see us catch fish with a net."²³ It might appear from this that the band encountered then (1605) in Penobscot Bay were unacquainted with the use of seines. The Penobscot, however, have another word for nets, *wada'p*, which has reference to basswood.

They used to go down to salt water for porpoises occasionally in large canoes manned by two and carrying a sail. Approaching the porpoises, the bow man shot one while the stern man paddled up so that the other could stick a lance into the animal and pass it back to him to lift into the canoe by inserting his fingers into its nostrils. This was a dangerous sport carried on for securing oil and fat. The Passamaquoddy still maintain their reputation as experts in this line.

For not only large bay fish, but also river fish—salmon, shad, and others—the harpoon (Fig. 31), *si'gawan*, with a toggle-head was used. This interesting implement consisted of a ten-foot pole with a rectangular cavity in the end wrapped with an eelskin thong. Into this aperture was mortised the spearhead, fastened loosely to the main shaft by a double strip of rawhide. This was a shank with single lateral barb, detachable from the main shaft under a little resistance. The shank or fore-shaft and head are all in one, about a foot long, made of hardwood charred in a fire to make it harder, with a barb an inch long on one side. The tying is ingenious, a doubled rawhide passed through a hole in the shaft and one in the



FIG. 31
Model of
Wooden Har-
poon for Sal-
mon and
Beaver

²³ Rosier, p. 371.

shank of the spearhead, and tied with a double wrapped knot. The advantage of this harpoon, they claim, is that a fish or seal when struck cannot break the head off, because it becomes detached and holds firmly by the rawhide until the animal can be lifted out of the water. The same idea,

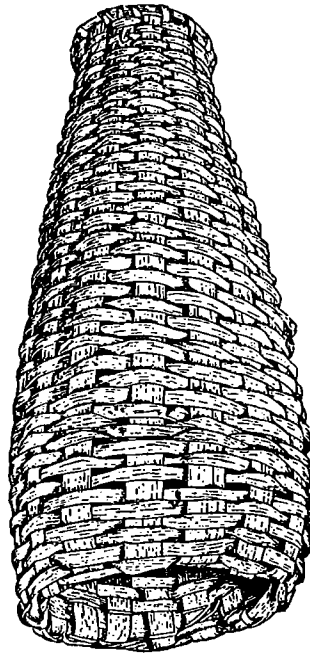


FIG. 32
Splint Basket Trap Set in
Streams for Fish

occurring widely among maritime tribes, was used until recently by Penobscot. Although it is said that fire-hardened wood is sufficient for the harpoon head, no doubt bone and stone were used in its construction in the days beyond the bounds of present tradition.

That the distribution of the fish trap, so common among the southern tribes, extended as far as central Maine is shown by the following data.²⁴ The Penobscot make their fish traps of rough splints in a simple twilled weave from approximately three to five feet in length with the usual indented bottom allowing the fish to enter, but not to pass out. The trap is used mostly for eels. A specimen of the smaller size, about three feet long and one wide, used for eels or for taking bait in ponds is shown in Fig. 32, *nahumu'hkagan*, "eel device."

Several stones are put in to sink it, and dead fish or heads are used for bait. The open end, through which the contents are removed, is closed by a piece of burlap tied over it. A line is passed through a loop in the side so that the trap can be hauled out of the water. This type of eel trap or "pot"

²⁴ The Malecite also used them.

is widely distributed among the eastern tribes and varies in only a few particulars.

A similar distribution in the north is accorded to another practice apparently at home among the southern tribes; namely, that of poisoning fish with plants. The following account, by an eye witness, of a fishing party in the autumn of 1900 is quite complete. The band was composed of about five families from Indian Island, and camped for about a week on Sunkhaze meadow, to obtain eels. They began by poisoning the stream with decoctions of pokeberry and Indian turnip root. The Indian's time for securing enough eels to last a year is at low water in August. Then the Indian turnip root, which grows in moist ground along streams, and the berries of the poke plants are richest and contain the most poison which stupefies the fish.

The party carried bags of berries and baskets of salt, depending upon game and fish for their sustenance during the trip. The first two days were spent in digging the roots and crushing them with the purple pokeberries upon the surface of flat stones. When a sufficient quantity of the mixture had been prepared, they stripped to the skin and, distributing themselves along the stream for a distance of a mile, plunged into the water, strewing the poisoned pulp thickly upon the surface and diving to the bottom, where they stirred up the muddy sediment with sticks and poles.

When the water was so strongly impregnated with the juices that the workers were driven ashore with inflamed and smarting skins, half an hour was spent in dressing and rubbing the inflamed spots with fresh plantain leaves. By this time the agitated water had settled. Torpid eels began to appear upon the surface, and before an hour had passed the top of the water was spotted with the bodies of dead or dying fish, which floated belly up, unable to escape. The children of the party, having recovered from their hurts, were then forced to enter the water and bring the fish ashore, where they were skinned and salted by the women. After this the eels were placed upon dead limbs and laid in the sun to dry for two days. Then they were hung up in a tent and smoked until there was no drip from the suspended bodies.

Weirs (*sikmohka'gan* (sing.) and *k'we'nagan*) were of several sorts. The one most commonly seen on the banks of the Penobscot is a fence of brush or sticks projecting obliquely down stream, or a corral with an entrance on one side. Smaller rivers were fenced across leaving a narrow opening near the middle, where fishermen armed with spears, harpoons, and nets gathered in canoes, if necessary, to capture the fish as they passed through. Another contrivance consisted of a lattice of parallel sticks placed horizontally just on or below the surface of the water at the gate of a dam of stones or brush built across the stream. All the water would have to pour over this griddle, and the fish, in trying to get by down stream, would be left floundering upon it where they could be seized by those watching for them. Eels were obtained in this way.

The description of an eel weir on Passadumkeag stream ought to illustrate matters better. In the fall, about a dozen Penobscot families assembled at a point some miles up stream, where an island and abundance of good birch bark for shelters furnished an inviting camp site. The Indians began by constructing fences of willow rods filled in with brush, one running obliquely down stream from each shore. At the apex of these fences were arranged three shallow open-work trays (*senu'djis*), of willow rods placed horizontally. Each was about ten feet long, seven wide, and a foot deep. They were set one above the other, the ends overlapping a little, that at the top having the largest mesh spaces, that at the bottom the smallest. It can be seen from this that the only point of egress for the eels going down stream was through the opening, and that the largest fish would be left floundering in the upper tray, the smaller ones in the lowermost, while the water passed through freely. People stood guard at the trays with large receptacles, baskets or barrels, near at hand, into which they transferred the fish with dip-nets or spears as soon as they were seen. They were then conveyed to the shore where the women were busy splitting, drying, and smoking them. The habits of the creatures were well known to the gatherers, who took advantage of the fall exodus of eels down to salt water. They say

the eels began to go down stream early at night, passing by hundreds, then at a certain hour they stopped and did not start to run again till the next night. In the interval, the people took their sleep and enjoyment.

In places where weirs are set for eels pits are dug along the shore some three or four feet wide and about three deep, the number of the pits depending upon the quantity of eels caught. These pits are made for the freshly caught eels to be thrown into, so that they will free themselves of slime, for otherwise they could not be handled conveniently. In several places up the river are to be seen, adjoining old villages or camp sites, a series of such pits overgrown with trees or shrubs, where long ago eeling parties have camped. They form one of the archaeological features of the region. One prominent locality of this sort is to be seen opposite the Teguk rapids halfway up the west side of Indian Island.

CULTIVATION AND GATHERING

The Penobscot were near the northeastern limits of the area of extensive native agriculture. Even at this day, with substantial financial encouragement from the State,²⁵ the Indians find it hard to reconcile themselves to husbandry, with the passion for the chase so strong in them. At the permanent settlements along the river, chiefly upon the larger islands, the desultory cultivation of a few native vegetables was carried on for immediate use and for preservation against the winter. Different families had their truck patches near their wigwams or in nearby clearings, which were termed *ki'hkan*, "garden," or *nabi'zunki'hkan*, "medicine garden" (*ki'hke* to plant).

An old-fashioned way of growing climbing beans, still followed by some, is to plant them at the foot of a circle of poles about ten feet long, leaned together at the top like the framework of a wigwam. Three or four of these racks are all that one family cultivates. They say that in ancient times the ground was turned over with sharpened sticks, and when

²⁵ A bounty on every bushel is annually paid the Indians for corn and other vegetables raised. Cultivation is at present the work of men.

the seeds had been planted dead fish and refuse were put on top as fertilizer.²⁶ Other maize complex devices are lacking.

The occasional burning off of berry fields, to clean out and replenish, is one step carried out toward preparation of the soil. The many islands in the river, still the sole property of Indians, produce abundantly blueberries, blackberries, and huckleberries for the labor of gathering.

A list of native cultivated vegetables includes *skamu'nu*, corn; *adaba'kwai*, beans; *wamptagwe'wiminal*, cranberry beans (lit. "wild gooseberries"); *we'notcwimi'nal*, peas (lit. "white man's berries"); *wasaw'e*,²⁷ pumpkin, squash ("yellow"); *abadelmuimi'nal*, wild rice ("laughing berries").

In regard to the plants mentioned, the following ideas are held. Corn was the chief original vegetable, and beans were next in importance. The wild goose (*wamptagwe*) is believed to have brought beans to the Indians from some region to the south.²⁸ The elucidating name "white man's berries" tells the story of peas as far as the Penobscot are concerned.

Wild rice, while not cultivated, was gathered where it grew and was treated much like corn for consumption.²⁹ Potatoes, brought by the white man, are called *apicedezal*, presumably after the English. Several indigenous tubers, the artichoke and another called *pena'psk*, as will be seen later, are the Indian potatoes.

Plants employed in the curing of disease have been treated separately with their special functions in an article on Medicine Practices (Speck, ref. 8, p. 316). The economic uses to which the different varieties are put will now be treated.

FOOD AND ITS PREPARATION

In the fare of the natives meat (*wi'u's*) was and still is largely the staple all the year round, fish taking a prominent

²⁶ A comic story is told of an Indian who was planting seeds and putting the fish carcasses on them. A white man came along for the first time and told him to plant the fish to see if he could raise a crop of them. The Indian tried it, thinking he had a valuable secret until he told his friends. This is a sample of native humor.

²⁷ Oranges are called *wasaweri'zal*, "little squashes."

²⁸ The Narragansett similarly thought the crow brought them their first corn and beans from the southwest, cf. Willoughby, p. 130, quoting Roger Williams, cf. Williams, p. 114.

²⁹ Dr. Chas. E. Chambliss also records mention of this fact, Sept. 1932, from a Penobscot informant.

place, while corn foods supplied the pot through late summer and fall until the winter hunt. A standard food is *skamu'nu*, boiled hulled corn. The process begins with scraping the dried corn from the cob by rubbing it over with another dry hard cob. A deer's lower mandible was also employed as a scraper. Then the corn is boiled for a while in a vessel containing a quantity of wood ashes and water. This separates the hulls from the kernels. The cook then empties it into a rinsing basket, *tawigaspata'sudi*, "washing receptacle," and, carrying it to the river bank, jounces it up and down in the water to rinse it clear of lye. The basket referred to is coarsely woven of ash splints, and is oblong in shape. Next the mess is boiled with fat in a pot, and eaten. As soon as the boiled corn left from the first meal gets cold and grows stale it ferments, but it is liked just as well sour. Other things are often put in the corn soup to add a flavor: an eel's backbone, moose leg, deer or moose backbone, and cracked joints for their marrow. Hunters always save the shanks of moose for this purpose. One of these may last quite a season, being boiled over and over again in soup. Neighbors will even send around to borrow one to boil in their soup. With the plain corn, beans are often combined, making corn-and-bean soup. Peas are treated in the same way.³⁰

In preparing corn flour, the mill, *tagwa'gan*, consists of two rounded pebbles with flat sides which are used as pounders. They rest upon a square sheet of birch bark (Fig. 33). The larger of the two stones is the nether stone resting in the middle

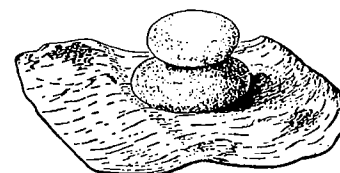


FIG. 33

Stone Corn Pounders and Birch-Bark Table for Crushing Corn

of the bark. With the second stone held in one hand the corn is pounded, being fed with the other hand, while the powder tumbles off the stone on to the bark. Some of the millstones are quite small for the work, not being more than

³⁰ It is interesting to compare this and the following Penobscot recipes with those of the Iroquois. Cf. Parker (2) and Harrington (1), p. 583.

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PENOBSCOT TALES AND RELIGIOUS BELIEFS

BY FRANK G. SPECK

INTRODUCTION

The Penobscot tribe inhabits the Penobscot river valley of north central Maine. This is the southern frontier of the northern forest zone, or taiga, where the "snowshoe-hunting" type of culture as defined by Steensby, or the "ice-hunting" area of Birket-Smith meets the maize area.

This paper is a supplement to a manuscript on Penobscot ethnology. The investigation was officially begun in the summer of 1909, in the interests of the University Museum, University of Pennsylvania, through the support of Dr. George G. Heye. It was continued steadily from this time for seven years, most of my time when freed from duties at the University being given over to the project; the language was devotedly studied, and residence with the tribe enjoyed through different seasons of the year during periods of from several weeks duration to several months at a time, permitting me to participate in practically all of the activities then carried on. The occasion was opportune, because there were then a score or more of aged Indians whose life span reached back to the days when European influence had not deeply affected their economic life. The railroads had not spread their network of highways across the old hunting grounds of the tribe. The northern forests had not been wasted and burned in the frenzied process of exploitation for lumber and pulp. Beaver, moose, deer, and even the now almost exterminated caribou were abundant and nearly everywhere to be had by the hunters. Many of them had been born in birch-bark wigwams in the interior forests lying between the old settled counties along the coast and the Canadian frontier. The cry of the wolf was a not unfamiliar sound to some of them in their childhood. It should be borne in mind, however, that for more than a century the Roman Church had held

I owe my sincere expressions of obligation to this older and estimable generation of Penobscot men and women for their cooperation in dictating and explaining the beliefs recorded—especially to Newell Lion, Gabe Paul, Hemlock Joe, Peter Nicolar, Joe Solomon, Newell Francis, John Attean, Joe Paul Susup, Frank Denis, Katie Paul, Clara Neptune, Cecile Barker, Sarah Paul, and Alice Swasson. I have drawn considerably, also, from the information given by old Joseph Nicolar in his little book "The Red Man."¹ All but three of them have died since I first began the study of this interesting group in 1907, and with them has gone the possibility of the study of aboriginal Penobscot culture. Among the Penobscot of a younger generation should be mentioned the names of some in particular who have been consulted in the course of my study: Molliedellis Nelson; John F. Susep; and especially that of Roland Nelson who through his influence in his tribe and lectures in the country at large has done much to dignify Penobscot history and culture. My old friend and companion Gabe Paul, who, though a Malecite by birth, has lived with the Penobscot for over forty years, has also helped in the collection of Penobscot ethnological material.

The Penobscot and other Wabanaki units have these characteristic traits of Northeastern America: limited nomadism centering around the reindeer or caribou and the moose, absence of agriculture, similarities in hunting and fishing devices, skin and birch-bark canoes, skin and bark covered conical wigwams, skin leggings, tailored coats with hoods for protection in winter, skin moccasins of a fairly uniform type, birch-bark vessels and baskets, cedar or bass-wood fibre bags and thongs, characteristic decorative motives in birch-bark etching and in various later forms of embroidery, the absence of stratification in social organization, the family-unit with exclusive hunting districts, weakness of government, abandonment of the aged and of orphans, occasional economic anthropophagy, certain games and contests, the absence of religious ceremonial gatherings, characteristic conjuring shamanism, and general tendencies toward individualism in society and religion.

Much of the original religious philosophy has been lost among the Penobscot through an almost three-century contact with Roman missionaries. Nevertheless their language and their wealth of mythology are helpful in reconstructing the Penobscot essentials. There is every indication that even more could be done with the somewhat less modernized Malecite, Passamaquoddy and Micmac, the study of which should permit a final evaluation of the Penobscot religious problem.

Among the Algonkian, as among most preliterate peoples, there is within the same tribe a wide range in religious feeling and performance.

¹ Joseph Nicolar. *The Life and Traditions of the Red Man*, Bangor, Me.,

In these tribes religious attitudes vary from gross indifference, through casual knowledge of religious beliefs and luck-bringing practices, to cases of deep personal interest. The latter include, of course, the thinkers of the tribe. There seems nowhere to be a group without them.

Among the Northern forest people there are not the religious societies composed of devotees and initiates such as exist among the Ojibwa and other Central Algonkian tribes. We possess no direct evidence to show that such existed among the Wabanaki peoples any more than among the Labradorian Algonkian or the Eskimo. We might wonder if the deficiency of formal religious ceremonies is as characteristic of the Wabanaki as it apparently is of the whole northeastern area. There seem to have been no important religious rites comparable to the periodically recurring ceremonies of the central Algonkian or Iroquoian people. This of course does not mean that the Penobscot lacked ceremonial occasions such as installation, greeting, wedding, burial rites, and dances. Some of these still exist, but in native concept they are ceremonies of a social rather than a devotional or religious nature. One may conjecture, however, from the fact that the Penobscot were somewhat more localized than the tribes north of the St. Lawrence, where communal religious ceremonies are hardly known, that a few may formerly have occurred among them.

The professional priesthood, the conjurers and shamans, have disappeared completely with the death of the last heathen *mâde'olanuwak*, or "jongleurs" as the French missionary explorers styled them, probably a century ago, and the conversion of the last half-pagan practitioners of witchcraft several generations ago.¹ Whatever cosmological beliefs and psychic practices were known to them have been obliterated. The Jesuit savant Pierre Biart and the ascetic Ennemond Masse began in 1611 their mission among the Souriquois at Port Royal in Acadia, and levelled their most strenuous attacks upon the sorcerers, those stubborn bulwarks of Northern Algonkian paganism, while the common people were left in possession of their religious superstitions. Though their Penobscot mission was sacked by Argall in 1613 at Saint Sauveur and at Port Royal, esoteric shamanism had already been destroyed among the Wabanaki and today Penobscot cosmology is preserved only in mythology.

¹ The results of an endeavor to assemble what information could be gathered from aged Penobscot Indians who knew of this bygone period were published in 1920 in a monograph on Penobscot Shamanism to which the reader is referred (*Memoirs of the American Anthropological Association*, Vol. VI, No. 3, 1920).

I. PENOBSCOT BELIEFS ABOUT THE SUPERNATURAL

The Concept of the Supreme Being

Other Supernatural Beings

Gluskabe the Transformer,

Supernatural Creatures and Phenomena of the Wilderness

Beliefs: Concepts of the Universe

Omens and Taboos concerning Animals

Personal Animal Taboos

The Game Owner Concept

Power of Wish

Divination

Dreams, Amulets, Omens and Some Special Taboos

Weather Signs

THE CONCEPT OF THE SUPREME BEING

The spiritual force dominating the universe is a power, or in the opinions of some a being, called Kétcí-Ni-wéskwe, Great Being. In modern Penobscot belief it corresponds to the Holy Spirit, the third of the Catholic Trinity. This concept, as even some of the Indians are inclined to think, is possibly the result of Christian teaching. Only the vaguest ideas are obtainable about the Great Being. Nicolai says: "By his will all things moved; all power comes from him. . . . He is in the sun, moon, stars, clouds of heaven, mountains, and even the trees of the earth."¹ He seems to have been the creator according to recent native concepts which undoubtedly, like those expressed by Nicolai, have been influenced by Catholic teaching. He does not appear in myth nor was supplication addressed to him. Originally the Great Being may have been similar to the usual Algonkian Great Spirit. The term *manitu* itself is not found in Penobscot, its cognate appearing as *wahán-do*, the suffix *-hán-do* denoting beings possessed of supernatural power. The ordinary generic term for an evil spirit is *wahán-do*, which is likewise a "bug" or "insect." Evil spirits were thought to take the form of noxious insects and to cause disease and misfortune.

The Supreme Being is also called *debéldak*, "owner," a variant of which is *debélmalak*, "our owner," and *gizi-uli-'to'lak*, "our maker, creator." These terms have been transferred to contemporary Catholic usage, and their older connotations cannot now be ascertained. Both the words and their present applications must date from early priestly teachings, for I have recorded the same designations in St. Francis Abenaki and Wawenock.

The term *ktahán-dowit* may be translated "great spiritual being." It is the term spontaneously used in native mythology, and in a cognate

form is encountered among the Algonkian tribes of southern New England and among the Delaware tribes.

The antithesis of the Great Being is designated *Madji-ahán-do*, Evil Spirit. He is the arch-demon of evil corresponding to the European personification of the devil, from which he is undoubtedly derived.

OTHER SUPERNATURAL BEINGS

The Penobscot personify animals and many other natural manifestations. The term *awa's* refers to the individual animal or beast as it is generally translated, to certain human personifications dwelling as demons apart from human society, and to the elemental manifestations. There are three classes of beings: (a) the quasi-human creatures of all kinds frequenting the forest, bodies of water and the air, (b) the races of animals of the same realm, and (c) the phenomena which to our minds form part of the physical geographical universe without vitality, but which, to the Northeastern Algonkian, are personalities of the air, land and water.

(a) Individual supernatural human-like creatures dwell in the environment of man. Some of them constitute groups or tribes, play the part of major actors in mythical narratives, are looked upon as coexistent with man and often enter into active association with him. They have certain idiosyncrasies of character, desire, will, habits, and physical characteristics. The origin of some of them is explained in the myths. Others, like Gluskabe, lead an existence whose origin is taken for granted without explanation. To this class there is little that is common property, so I shall treat them individually in the subjoined list.

(b) The beings which we generally know simply as animals have "tribal" existence and individual natures as do the tribes of man. Only they are more diverse in form and habit. Not being endowed with technical gifts and powers equal to man, they are weaker than he. Consequently they fall victims to his attacks, and become his source of life. As races and as individuals, moreover, man owes them certain obligations by the fulfillment of which he satisfies their demands so far as he comprehends them.

(c) The personified natural phenomena known as agencies of power were undoubtedly more numerous in the past than they are at present. *Gluskabe the Transformer*: The most important personage in Penobscot religious lore and one purely aboriginal in character is named Gluskabe,¹

¹ *gluski* is translated as "deceit, lie, nothing." *-ábe* or *-ábe* is a stem denoting "person" (cf. also Nicolai, p. 12). The name is cognate with Wawenock, *Gluskabé*; St. Francis Abenaki, *Gluskobá*; Malecite, *Glúskap*; Micmac, *Kulóskap*. The English spelling of the name, as adopted by several authors, is Gluskabe.

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"deceiver, liar," or "man from nothing," according to different opinions among informants. The translation may be Deceiver or Trickster, but the epithet is not uncomplimentary because it refers to the ability to outwit one's enemies by strategy and cunning. He is the legendary hero and transformer personage of the Wabanaki tribes. Even at the present day his performances and his personality are sources of marvel to the Indians, many of whom though they are observing Catholics, nevertheless cherish a superstitious belief in him. Not only actual transformations but unaccountable peculiarities of the whole country are attributed to his agency. He is largely responsible for the present aspect of the earth and its inhabitants. The major rôle played by him as a culture-hero is quaintly described by Nicolai: "Gluskabe, the man from Nothing was claimed by all... to be the first person who came upon the earth, and he was their (the people's) teacher. He taught them how they must live, and told them about the supernatural power, how it was in every living thing, and... it sent him... to subdue all obstacles which were against mankind; and to reduce the earth to such a state as to become a happy land for the people."¹

As often in America, the culture-hero is merged with the trickster. Some of his performances are of a trifling nature, and while Gluskabe is the great supernatural wonder, he is not spoken of with reverence nor is he feared. While we gather from the myths that he was often the helper of mankind, he does not seem to have been profoundly concerned with human doings. His own personal interests, his success against rivals were his prime motives. The extolling of ethical principles and provision for his "descendants" do not appear at the beginning of his career; a mission develops only with the course of events.

Practically all of the northern Algonkian tribes, as far north as the Montagnais, and as far west as the Ojibwa, to my knowledge, lay the scenes of their transformers' adventures within the bounds of their own habitat, deriving its natural peculiarities from the Trickster's deeds. The Malecite, having fundamentally the same transformer as the Penobscot, believe that their hero went up St. John's river; the St. Francis Abenaki tell of his ascent up the St. Lawrence,² while the

¹ Nicolai in his mythical accounts has evidently exaggerated the dignity of the transformer (*op. cit.* p. v). He has neglected all the more profane popular stories concerning him and, in particular, the plausible humble origin of the hero. Informants living in the tribe (1918), particularly Newell Lion, from whom Nicolai received considerable help, claim that Nicolai gilded his material with Catholicism in accordance with his own fancies.

² Only one Abenaki informant has been found who knew any portion of the Gluskabe cycle or even the name: François de la Gonzague, who was encountered in 1912 living among the Huron and other sources for the

Penobscot say that he came to the mouth of the Penobscot river, ascended it and then went down again, and departed toward the sea, going southward when last seen. Some of the incidents of Gluskabe's journey explain the physical characteristics of the Penobscot valley. The Penobscot river itself is his own creation after killing a monster frog that caused a world drought, the released waters finally flowing away to form the river. Again, the twenty-two families constituting the nucleus of the Penobscot tribe sprang from this period, taking their animal names from their relatives who in their eagerness plunged into the water to slake their thirst and were transformed into fish of different kinds. Thus originated the marine animals. Subsequently Gluskabe in his travels passed near Milo, Maine, where the prints of his snowshoes may still be seen on the rocks. Near Castine, down on the eastern shore of Penobscot Bay he landed his canoe, left his paddle near it, and chased a moose up into the woods for a great distance. On the beach at the point mentioned is a rock about twenty-five feet long, shaped like an overturned canoe. The rocks leading from it bear footprints of Gluskabe, which reappear frequently in the interior of the country according to some of the Indians who claim to have seen them. At another place farther down he killed the moose and cast its entrails across the water. There they still appear as a streak of white rock on the bottom of the bay at Cape Rosier. After cooking the moose he left his cooking pot overturned on the shore of Moosehead Lake and it is now to be seen as Kineo mountain on the eastern margin. Gluskabe subsequently disappeared from the Penobscot country, after effecting a number of transformations in animals and monsters and moderating the seasons. Now he resides at the "end of the world," some say to the east, some to the south. Before leaving, however, he promised the people that he would return some day and drive the enemies of the Indians back into the sea. Until such time Gluskabe and his grandmother, Woodchuck, live together in a wigwam where he makes flint arrowheads and she prepares pounded corn for the great event which will take place when Gluskabe has his wigwam full to the top with arrowheads. Finally there are myths telling how fortunate people have occasionally reached his dwelling place and secured the fulfillment of their wishes from him.

Gluskabe is responsible for a number of important innovations in the lives of men and animals. Among these are the distribution of tobacco, the capture and subsequent distribution of game over the world, the tempering of the wind, the removal of dangerous falls and rapids in the rivers, the reduction of the giant beasts, the tempering of the winter, the theft and distribution of summer, besides the bestowal of characteristics on some animals: the sparse growth of hair on the woodchuck's belly, the split wings and dark juice in the mouth of the grasshopper, the crook in the frog's backbone, the shyness of the fox when near man, the

turtle's penis and the characteristics of his upper shell, the black color of the skunk and his bad odor.

Among other beneficent acts attributed to Gluskabe, one not included in the cycle of the hero is the destruction of the Great White Hare, the giant of the north, who was gaining control of all the hares of the world. Hare lived, the tale narrates, on the peak of a great mountain in the far north where he ruled over a realm of hares. These hares were people who had fallen victim to a fierce witch and her daughters who had combed out their brains and sent them to the Great White Hare to dwell with him forever. Gluskabe invaded the domain of the Great White Hare, passing through the awful blizzard of snow with which the Hare surrounded himself, killed him and freed his victims, thus liberating hares to scatter throughout the world to furnish food for the people.

In all the above achievements Gluskabe benefits mankind. More than this, the various implements and appurtenances of travel which were made for Gluskabe's journey by his grandmother, the Woodchuck, such as canoe, snowshoes, game bag, moose-call, and the like, seem to be understood as the first of their kind invented, the manufacture afterward becoming known to the Indians.

There are several indications that the Penobscot concept of Gluskabe has been influenced by the traditions of the Micmac or Malecite of St. John's river, where most of the Gluskabe feats are located. Nicolai says, "None of the traditions (Penobscot) located the country wherein all these things took place, but it was agreed by all interested in later years that it was on the eastern part of the... world. So much of this belief remained... that the people began to look for the appearance of other people (the Europeans) in that direction, which proved to them afterwards that their belief was a true one." Among the Passamaquoddy and the Malecite I have heard it said that the Micmac know more than they about Gluskap. The Penobscot think that after leaving the main seats of his labors in New Brunswick he came down the coast to their river in the last stages of his earthly sojourn.

A short account of Gluskabe was given by a Penobscot woman to Leland¹ a number of years ago: "Gluskabe gave names to everything. He made men and gave them life and made the wind to make the waters move. The Turtle was his uncle, the Mink his adopted son, and the Woodchuck his grandmother. The beaver built a great dam, and Gluskabe turned it away and killed the beaver."²

¹ C. G. Leland, *Algonquin Legends of New England*, Boston, 1884, p. 65. The author also mentions other landmarks, one, quoting Thoreau, being Mt. Kineo which is said to be a cow moose killed by Gluskabe, this being a garbled reference to the usual version.

² Evidently refers to the Malecite version. This episode is lacking among the Penobscot.

"At Moosechick¹ he killed a moose, and the bones may be seen at Bar Harbor turned to stone. He threw the entrails of the moose across the bay to his dogs and they, too, may be seen there to this day as I myself have seen them, and there, too, in the rocks are the prints of his bow and arrow."

When the Indians find stones possessing natural shapes, resembling a face or a person, they sometimes keep them as curiosities if not for more superstitious reasons. I have heard them say, "It looks like Gluskabe, I guess he left his picture on it," and the like. Naturally all such places on the river or bay shore or on the mountain sides suggesting the human profile, and they are by no means uncommon in the rocky country, have the same said about them. Or they say it is the likeness of some local shaman. Despite some of the local variations in the minor performances of Gluskabe, the general tone is quite uniform.

Thus far no hint of a malicious twin brother to Gluskabe has come to light in Penobscot mythology, such as is reported by Leland and Prince for the Micmac or Malecite.² This is apparently a genuine negative characteristic, lending a rather distinctive color to eastern Algonkian when contrasted with Iroquois transformer tales.

Another author who had considerable contact with the Indians of Maine some years ago³ recorded from the lips of an aged informant information on the derivation of Gluskabe. I quote from her article but have harmonized the spellings of proper names to correspond with those adopted in this paper.

In the beginning Ketci Niweskwé made Adam out of earth but he did not make Gluskabe. Gluskabe made himself out of dust that was kicked up in the creation of Adam. He rose and walked about; but he could not speak until Ketci Niweskwé opened his lips.

Ketci Niweskwé made the earth and the sea, and then he took council with Gluskabe concerning them. He asked him if it would be better to have the rivers run up on one side of the earth and down the other, but Gluskabe said, "No, they must all run down one side."

Then Ketci Niweskwé asked him about the ocean, whether it would do to have it lie still. Gluskabe told him, "No, it must rise and fall; or else it would grow thick and stagnant."

"How about fire?" asked Ketci Niweskwé. "Can it burn all the time and nobody put it out?" Gluskabe said, "That would not do; for if anybody got burned and the fire could not be put out, they would die; but if it could be put out, the burn would get well."

So he answered Ketci Niweskwé's questions.

¹ *musi-ketci*, "moose rump," now Cape Rosier.

² Cf. Leland and Prince, *Kuloskap the Master*, N. Y., 1902, pp. 43-44. Gluskabe has a twin brother, Malsum, "wolf," who at birth emerged through his mother's arm-pit. The twin is opposed to Gluskabe's good deeds and subsequently vanquished. The story suggests Iroquois influence.

³ A. Alger, *Popular Science Monthly*, vol. 44, pp. 195-6.

Penobscot mythology credits Gluskabe with some twenty major achievements for the benefit of man, to wit: distributing over the world the game animals, food, fish, hares and tobacco; renewing the warmth of summer; protecting the eagle above who regulates daylight and darkness; moderating the destructive force of the wind; tempering the winter; bringing the summer north; reducing giant animals to a harmless size; domesticating the dog; clearing obstructions from the portages along the routes of hunting and travel; smoothing out the most dangerous waterfalls; creating the whole Penobscot river system; moderating the power of fire; making burns curable; creating sweetgrass; and serving as a source of power for those who come to his distant dwelling with their troubles. His benefits to mankind reach a climax in the mission he allots to himself to watch over his people and to return to the land at some unknown date, against which time he is preparing food and armament to save them in a crisis. By inference the Penobscot are also inclined to attribute to him the origin of their arts and inventions.

In some twelve episodes, moreover, he puts into practice the ethical code of the northeastern Indians, by punishing early mankind as well as fabulous beasts. For sins of overgreed in satisfying thirst he transforms the people into races of aquatic creatures. He punishes selfishness and avarice by inflicting death and disfigurement upon the giant frog for monopolizing the world's water supply, upon the grasshopper for hoarding the world's tobacco. He transforms and punishes the men who secure from him the gratification of their vanity and then disobey his rules. He twice disfigures his uncle, Turtle, for overstepping his allotted power. He switches and condemns the fox for deceiving, mocking and urinating over his poor grandmother, Woodchuck. Handsome women who mock are transformed into toads. He destroys the winter-god, Snow Man, and the Great White Hare for cruelty to mankind here below. He thwarts the withholders of summer, and robs them of their treasure. Skunk is punished and marked for knavery and for deceiving the bird above that causes day and night, and for interfering with the natural order of things. And, of much importance in native ethics, he opposes witchcraft and destroys witches.

Gluskabe's ethical code, like that of the natives, does not stigmatize the "white lie" which he uses for beneficial ends, employing it on the primeval game animals, the fish, the Wind Bird, Grasshopper, the winter-god, his malevolent brothers, the retainers of the "summer fluid," and his uncle Turtle. When he is found in unintentional error by his grandmother, however, he does not hesitate to confess to her and to obey.

Nicolar appears interested in identifying Gluskabe with the Catholic Holy Ghost. Hence Nicolar's story attributing Gluskabe's origin to the will of the Great Being can be best understood as deriving from Catholic teachings: "Said the Great Spirit, 'I have given the earth four seeds,

power and strength to them all except man; but this I shall change. Behold Klose-kom-beh, my spirit, has gone forth to warn those in power that at the bidding of man he shall acknowledge him as chief.'"¹ The origin of the hero as an orphan boy, as the weakest of a family of brothers or in other humble guises (which are the origins also of the other mythological heroes, Froth, Fast Runner, Snowy Owl, Long Hair, and Seventh Son), evidently shows the aboriginal point of view—one much more in harmony with the myth concepts general among the Algonkian peoples.

As the creator of the first pair of human beings, Gluskabe is again depicted in a form to suggest later Christian influence. After preparing the earth for the red race, he met an old woman who called him grandson. She had sprung from "the heat of the sun warming the dew on the rock." Then she consecrated herself to his protection, but in this version she is not called Woodchuck as in the native texts. Another being, a male, then appeared to Gluskabe and posed as his maternal uncle. He sprang from "the heat of the sun on the foam of the waters." He was instructed to search for his mate who should be "born from the bloom of plants." This pair then became the progenitors of the people. The tale appears to have been extensively retouched by the pens of amateurs.

The heroes of Penobscot mythology, Long Hair, Froth, Snowy Owl, Fond-of-Traveling, Fast Runner, Abandoned Boy, White Weasel, and even Skunk, resemble Gluskabe in character and are very similar to one another. All of them begin life as poor orphans or waifs, and three of them, Long Hair, Snowy Owl, and Froth, are cared for and raised by their grandmothers, two of them, Long Hair and Froth, having Woodchuck as grandmother. Five of them, Long Hair, Froth, Snowy Owl, Abandoned Boy and White Weasel, develop into infant prodigies, all having magic bows and arrows, sometimes of ivory, with which they progress rapidly from hare hunters to big game hunters. Both Long Hair and White Weasel are like Gluskabe in wishing, early in life, to search for relatives who have abandoned them. Next come the miraculous deeds. They have moccasins made for them as Gluskabe had snowshoes, and all of them meet and slay beast-ogres who are menacing the lives of the people. They undergo tests at the hands of cruel masters and vanquish them with apparent ease. Snowy Owl, like Gluskabe, meets and destroys creatures who are responsible for a water famine. Fast Runner, Long Hair and White Weasel all succeed in tests of beaver hunts and ball games, as Gluskabe did. These minor personages, however, are not by any means as great transformers as Gluskabe. Long Hair transforms his enemies into sharks; Fond-of-Traveling punishes his opposers by

¹ This paragraph occurs also in *Historic Maine and Indian Mythology*, anonymous author, but possibly by Francis West, who is given as the illustrator. Published by Consolidated Steamship Lines, no date, New York.

wessu said, "Now everything is fixed all right. This is as far as I can go now. Day after tomorrow I will get where you are." He said, "Now when you go along you follow your dog. He will show you the way to the wigwam where you want to go."

So White Weasel and his dog went on. Then they came to a village and right away the dog went ahead. He went to the first wigwam and wagged his tail. Then a man came out and he said, "Father, our dog, 'Bad Dog,' has come." White Weasel then went up to the door and said, "Kwe!" The answer came, "Kwe. Come in. We have company." He said to White Weasel, "Sit down here at the back end. I am glad to see a strange man. Where did you find my dog, 'Bad Dog'? I lost him a long while ago." White Weasel said, "That dog was raised with me." While they were talking a fox poked his head in and then the old woman took up the poker and struck the fox. She said, "Go right away. You are always running in whenever anyone comes visiting." He went away crying and when he came to the chief he said, "A strange man has come. He has a savage looking dog. He must have much magic." The chief said, "In a few days we will know how much magic he has." The old woman said to her sons, "Go get that tail." So one went and got a great magic whale's tail. He threw it in the fire and roasted it white. It was there cooking when a man came in and took it and carried it away. Then the old woman cried and said to White Weasel, "When anyone comes here they always test him by annoyance but perhaps they can not always do so." Then she said, "Go get another tail. He must be very hungry." Again another one got a tail. Again the old woman threw it in the fire. Again it was almost done when another man came in and quickly grabbed the tail. Then White Weasel said, "Don't touch it. I want to eat it." Then the man laughed and he said to White Weasel, "You indeed, as if you can stop me." Then he was about to go out when White Weasel grabbed his arm and pulled it from its socket. That man went to his wigwam and the chief looking at his man saw he only had one arm. The chief said, "It seems that a great magic man is in our company but his magic powers will be quickly known." Next morning Mikamwessu came and White Weasel rejoiced when he saw his friend. When the people saw these magic men, White Weasel and Mikamwessu, right away they abused them. Mikamwessu said, "Now because you abuse me your village will soon be covered with only sumach." Next morning a man came and notified White Weasel and Mikamwessu. He said, "We are going to wrestle. It is lonesome here and we must occasionally play." White Weasel said, "I am glad. I also like to play." Mikamwessu searched in a bark vessel and took out moccasins. He said to White Weasel, "Put these on." Then White Weasel went and started for the wrestle. When he came where they were on a solid ledge, he said, "I am ready." Then a big man came out on this ledge and as far as his knees he was sunk into the ledge. White

Weasel said, "You grab me." So the man grappled with White Weasel. The man thought, "Soon I will dash him to death." But as he grappled with White Weasel he could not throw him and White Weasel landed on his feet every time. At last White Weasel said, "Let me grapple with you. Look out for me." So he grappled with the man and as he grappled he even broke off his legs and killed him with the fall. Then all the people bowed their heads and left quietly.

Then White Weasel went to his wigwam. The old woman said to him, "For a long while these people have abused others and now they see what they have been looking for."

Next morning a man came and said, "Will you go to play ball with us on a little island near here?" White Weasel said, "I am willing. I am fond of playing ball." Then the whole village started for the little island to see them play ball. Then Mikamwessu went to get ready. He went along the edge of the shore and when out of sight came to a great magic rock. He turned it over and dragged it to the water. It became a big canoe of rock and he got in and began to paddle. He came paddling back to the village and said to White Weasel, "We will start paddling." So they paddled. At last they saw a big island and when they got there and landed the chief hollered to them and said, "We are going to play ball far across the island." Then Mikamwessu said to White Weasel, "You go with them and stay behind them and when they reach the other side of the island, then you come back."

So White Weasel went but he kept behind the others. The other people were happy. Then they reached the other side of the island and White Weasel turned quickly and went back to the canoes where Mikamwessu was already ready. He said to White Weasel, "Now jump in quickly." He jumped in and then suddenly looking they saw the people running down to the beach. Then Mikamwessu hollered and said, "My grandfather, blow the island away with a north wind." Soon such a wind blew. When they landed on the shore at the village, Mikamwessu said, "Now we have satisfied ourselves. All bad people are dead. From now on nothing but sumach will cover their village."

27. SKUNK VISITS GLUSK'BE¹

One time Skunk set out for a long journey away from his people in the woods to become a great person. Many of his friends had done the same and become great warriors but he decided to distinguish himself in some other way than by fighting. He traveled for a long time and saw many moons. During this time he had become full grown with a beautiful creamy white coat of fur and a long bushy tail. When he stopped to visit the tribes of the animal people the girls offered to mate

¹ Recorded by Molliedellis Nelson.

with him but he would have none of them. He was on his way to find Gluskabe.

At last he grew tired and decided to rest. While asleep he dreamt of a mountain where nothing but tall green grass grew. In the morning Skunk continued on his way. Again in two days he stopped to rest, but did not sleep. Then he heard two birds over his head chattering in the trees. Being able to understand them he heard them say that Gluskabe was hunting in a land near at hand and that he needed a cook. Now Skunk was an expert cook so he hurried away to find Gluskabe. He came to a mountain with tall green grass on its sides, and when he looked again he saw smoke curling from the grass. Thinking that it was on fire he ran to the top of the mountain, and found nothing but Gluskabe sitting on a rock smoking a large pipe. From it came a sweet, strange odor.

"Kwe!" called Skunk. "I heard that you want a cook."

"You are a handsome fellow. I will let you cook for me," answered Gluskabe. "Neh! Let us go home."

And before Skunk could utter a sound he was whisked through the air. He closed his eyes because he was afraid. Gluskabe dropped him to the ground and when he opened his eyes he found himself in a strange land. Soon he found that not one of the strange people on the mountain could understand him. These strange people were not like him as were the other animal people below — they were the spirits of the hunting grounds and warriors of the sky.

In the winter when the snow fell to the earth, Skunk was anxious to learn where snow came from. So he left the wigwam of Gluskabe and wandered among the strange people. At last he came to a large bird sitting upon the floor of the sky. Skunk learned that this was the great snow bird, whose downy feathers became snow which fell upon the earth. After he had learned about the snow bird he determined to find the eagle. The eagle had the power to fill the earth with darkness, and this he did every night. When he became tired holding up his wings in the daytime he would let them rest. This was the cause of cloudiness in the daytime. As long as the eagle held his wings up it was daylight; when he folded them it was dark. Now Skunk decided to play a trick on the animal people so he took a piece of string from Gluskabe's wigwam and tied one of the eagle's wings. That day half of the world was dark, the other half light. Because Skunk tied the wing so tightly, no one, not even Gluskabe, has been able to untie it. For this trick Gluskabe emptied his pipe and with the ashes colored the skunk with smut, which accounts for his color today. Then he breathed on him and sent him down to dwell with the animal people again. As Skunk walked through the grass the grass became evil-smelling. But Gluskabe breathed on the bad-smelling grass and it became sweet-smelling — the sweet-grass of today. Since that time Skunk must hide in the daytime

and is seen about at night. The animal people do not consort with him or live very near him because he is evil-smelling. And the grass through which Skunk has walked is not eaten by any of the animal people. But Gluskabe sweetened the odor and it became sweet-grass.

And one more thing. When Skunk tied the eagle's wing a feather dropped out and fell on the grassy mountain. The mountain grew smaller every day until it disappeared.

28. THE ORIGIN OF CORN AND TOBACCO¹

A famine came upon the people and the streams and lakes dried up. No one knew what to do to make it different. At length a maid of great beauty appeared and one of the young men married her. But she soon became sad and retiring and spent much time in a secret place. Her husband followed her one day and discovered that she went to the forest and met a snake, her lover. He was sad, but he did not accuse her; he loved her so much he did not wish to hurt her feelings. He followed her, however, and she wept when she was discovered. Clinging to her ankle was a long green blade of a plant resembling grass. She then declared that she had a mission to perform and that he must promise to follow her instructions; if so, he would obtain a blessing that would comfort his mind in sorrow and nourish his body in want, and bless the people in time to come. She told him to kill her with a stone axe, and to drag her body seven times among the stumps of a clearing in the forest until the flesh was stripped from the bones, and finally to bury the bones in the center of the clearing. He was told to return to his wigwam and wait seven days before going again to the spot. During this period she promised to visit him in a dream and instruct him what to do afterward. He obeyed her. In his dream she told him that she was the mother of corn and tobacco and gave him instructions how to prepare these plants to be eaten and smoked. After seven days he went to the clearing and found the corn plant rising above the ground and the leaves of the tobacco plant coming forth. When the corn had born fruit and the silk of the corn ear had turned yellow he recognized in it the resemblance to his dead wife. Thus originated the cultivation of corn and tobacco. These plants have nourished the bodies of the Indians ever since and comforted their minds in trouble.

29. THE MOUNTAIN LOVER

There was once a young Penobscot girl who would have nobody in the village for her husband. Different men wanted to marry her but she refused them all. Once she declared that only if Keta'dan, Mountain, should come and ask her she would marry him. She used to go up on a

¹ An abstract based upon a version recited by Roland Nelson.

Exhibit 5

JAMES E. TIERNEY
ATTORNEY GENERAL



RECEIVED FEB 22 1988

STATE OF MAINE
DEPARTMENT OF THE ATTORNEY GENERAL
STATE HOUSE STATION 6
AUGUSTA, MAINE 04333

February 16, 1988

William J. Vail, Chairman
Atlantic Sea Run Salmon Commission
State House Station #41
Augusta, Maine 04333

Dear Chairman Vail:

I am writing in response to your inquiry of February 5, soliciting the advice of this office concerning whether there is any legal impediment to the taking of approximately twenty Atlantic salmon from the Penobscot River by the use of gill nets by members of the Penobscot Indian Nation. For the reasons which follow, it is the Opinion of this Department that, on the facts as we understand them, such action would not be prohibited.

As you indicate in your letter, and as we have verified with representatives of the Penobscot Indian Nation, members of the Nation intend, during the Atlantic salmon run this coming summer, to place gill nets in the Penobscot River within the boundaries of the Penobscot Reservation. The purpose of these nets is to catch up to twenty Atlantic salmon for the consumption of members of the Nation. Since the use of gill nets is generally prohibited within the inland waters of the State, 12 M.R.S.A. § 7608, you ask whether this activity would be legal.

In the opinion of this Department, it would be. Pursuant to Section 6207(4) of the Act to Implement the Maine Indian Claims Settlement, 30 M.R.S.A. § 6201, et seq., enacted by the Maine Legislature in 1980, members of the Passamaquoddy Tribe and the Penobscot Nation are authorized to take fish, within the boundaries of their respective Indian Reservations, and "[n]otwithstanding any rule or regulation promulgated by the

ATTACHMENT C.

- 2 -

Commission or any other law of the State," so long as the fish so taken are used for "their individual sustenance." On the facts as they are presented to us, the salmon to be taken this summer are few in number and will be consumed by members of the Penobscot Nation. They will not be in any way sold or processed for sale to others. That being the case, the activity in question would clearly fall within the purview of Section 6207(4) and would therefore not violate "any other law of the State," including the prohibition against taking fish with gill nets.

This is not to say, however, that the State is without recourse in the event that fishing activity by an Indian tribe or nation threatens the existence of the resource in question. Pursuant to Section 6207(6), you, in your capacity as Commissioner of Inland Fisheries and Wildlife, have the power to initiate proceedings leading to the adoption of remedial measures applicable to activity by an Indian tribe or nation which is "adversely affecting or is likely to adversely affect the stock of any fish or wildlife." While the taking of twenty fish this summer would not seem to pose such a threat, you should be aware of your powers in the event that such a threat should in the future arise.

I hope the foregoing answers your question. Please feel free to reinquire if further clarification is necessary.

Sincerely,


JAMES T. TIERNEY
Attorney General

CH/ec

cc: Priscella A. Attean,
Penobscot Indian Representative

Exhibit 6

PENOBSCOT NATION
Indian Island, ss

TRIBAL COURT
Criminal Docket No.95-143 & 144

Penobscot Nation)
 Plaintiff)
)
 Vs.)
)
)
David Daigle, Sr.)
 Defendant)

DECISION AND MEMORANDUM

This matter comes before the Court as a Motion To Dismiss filed by the Defendant, David Daigle, Sr. The Defendant asserts the Tribal Court lacks jurisdiction.

I

The Defendant, David Daigle, Sr., is charged with a violation of 12 M.R.S.A. 7801-9 (Operating a Watercraft While Under The Influence of Intoxicating Liquor) and 12 M.R.S.A. 7801-9A (Failure To Comply With Duty To Submit).

The offenses are alleged to have occurred on June 11, 1994 on the Penobscot River. This fact is stipulated to by the parties. It is further stipulated that the offenses occurred within the area from the shore to the thread of the Penobscot River in an area between two islands in the Penobscot River, both of which islands are within the area defined as the "Penobscot Indian Reservation".

II

The issue before the Court is whether the jurisdiction of the Penobscot Nation Tribal Court extends to surface waters of the Penobscot River surrounding the islands in the river. The Court, as set forth hereinafter, finds that such jurisdiction does exist. The Court would note that this decision is intended only to resolve the issue presently before this Court and is limited solely to the facts before this Court. Any broader conclusions or inferences which go beyond the instant fact pattern are drawn by the reader only and are otherwise unintended by this Court.

III

The Tribal Court's jurisdiction over criminal offenses is

acknowledged by 30 M.R.S.A. 6209-B(1)(A) as amended. The subject statute refers to offenses committed "on the Indian Reservation." The term "Penobscot Indian Reservation" is defined in Title 30 M.R.S.A. 6203(8) as "the islands in the Penobscot River reserved to the Penobscot Nation by agreement with the State of Massachusetts and Maine consisting solely of Indian Island, also known as Old Town Island, and all islands in the river northward thereof that existed on June 29, 1818, excepting any island transferred to a person or entity other than a member of the Penobscot Nation subsequent to June 29, 1818".

The Defendant's argument that the Court lacks jurisdiction because the offense is alleged to have occurred on the Penobscot River (emphasis added) as opposed to "one of the islands that comprise the reservation" is too mechanistic and pinched. Ultimately, it is not persuasive and does not prevail.

IV

In a broader historical context, the Treaty of 1818 referenced above, "established" the Penobscot Nation "reservation". The language with respect to the parameters of the Penobscot Nation Reservation as found in 30 M.R.S.A. 6203(8) does not "establish" the reservation but merely codifies the situation with respect to the reservation as it existed at the time of the Maine Indian Claims Settlement Act. For the limited purpose of this decision, that is a distinction without a difference and the definition of the "reservation" as set forth in 30 M.R.S.A. 6203(8) can serve as the functional equivalent of the "establishment" of a reservation.

As sovereign, the Penobscot Nation's rights, in the absence of cession, are reserved. This principle has been acknowledged from the earliest days of the Republic. The complete expression of this principle is found in Worcester v. Georgia, 31 U.S. (6 Pet.) 515, 559 (1832).

"In matters of internal self government within tribal territory, tribal powers are exclusive, and federal and state powers are inapplicable, unless such tribal powers have been limited by federal treaties, agreements or statutes. Absent a limiting treaty or federal law, tribal powers may be exercised unfettered by assertion of federal or state authority." E. Cohen, Handbook of Federal Indian Law, 236 (1982) citing Ex Parte Crow Dog, 109 U.S. 556 (1883).

Although the Maine Indian Claims Settlement (30 M.R.S.A.

6201, et seq) may be viewed as a "limiting" agreement, no reading of the act can be construed as expressly ceding jurisdiction otherwise specifically retained by the Treaty of 1818 over the waters of the Penobscot River.

As a consequence, the best that can be said about the Defendant's claim that the Tribal Court lacks jurisdiction by virtue of the "limiting" language of 30 M.R.S.A. 6209(1) (A) (1), (now 30 M.R.S.A. 6209-B(1) (A)) and 30 M.R.S.A. 6203(8) is that such language leaves unclear or ambiguous the issue of jurisdiction with respect to the waters surrounding the islands which comprise the reservation.

A long line of cases support the proposition that, with respect to "limiting" legislation, that "doubtful expressions are to be resolved in favor of [Indians]", State of Rhode Island v. Narragansett Indian Tribe, 19 F.3d 685, 691, C.A. 1(1994), citing Rosebud Sioux Tribe v. Kneip, 430 U.S. 584, 586-87, 97 S.Ct. 1361, 1363; 51 L.Ed.2d 660(1977) as well as South Carolina v. Catawba Indian Band, 476 U.S. 498, 506 & FN16, 106 S.Ct. 2039, 2044 & FN16, 90 L.Ed.2 490(1986).

When a Court interprets statutes that touch on Indian sovereignty, general rules of construction apply, but they must be visualized from a distinct perspective." State of Rhode Island v. Narragansett Indian Tribe 19 F.3d 685, 691, C.A.1 (1994).

Beyond the "distinct perspective" occasioned by its status as a sovereign, the Court must acknowledge the undeniable geographic and physical reality of this particular "reservation". It is an island reservation. The offense of Operating a Watercraft While Under the Influence of Intoxicating Liquor, of necessity can only be committed on water. There is no such inherent necessity with respect to the offense of Failure To Comply With The Duty To Submit. Such failure is continuing and could continue until such time as the Defendant was on a island within the defined reservation. Even were it not a continuing offense, the argument with respect to Failure To Comply is likewise vitiated.

To accept the narrow view of the defining term "reservation" as espoused by the Defendant, asks the Court to ignore such reality.

The Court's more inclusive view of the definition of "reservation" as found in 30 M.R.S.A. 6203(8) is further supported by the policy enunciated in various Supreme Court decisions regarding documents that "establish reservations" (or by extension, as in the instant case, "define" reservations) that

such documents "are not to be interpreted narrowly". United States v. Shoshone Tribe 304 U.S. 111, 116 (1938) and that ambiguities in such documents "are resolved in the Indians' favor". Winters v. United States, 207 U.S. 564 (1908).

Winters is further illustrative in the instant matter in that it gives rise to the so called "Winters Doctrine" (see F. Cohen, Handbook of Federal Indian Law, 578 (1982) which "exempts [the waters required to fulfill the purposes of reservations] from appropriation under state laws. "(see F. Cohen above at 577, citing United States v. Rio Grande Dam and Irrigation Co., 174 U.S. 690, 702 (1899)".

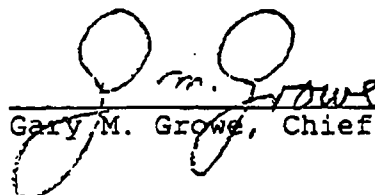
"Such rights should attach to all water sources - groundwater basins, streams, lakes and springs - which arise on, border, traverse, underlie, or are encompassed within Indian Reservations". (see F. Cohen above at 585).

The Court need not, however, search so far afield for support. Maine Courts since Spring v. Russell, 7 Me.(7 Greenleaf) 273, 290 (1831) have acknowledged the common law right accorded to the owner of land adjoining a fresh water river: ownership to the thread of the river. In the case of islands, ownership extends to the thread of the channel on either side of an island and the waters naturally in that channel. Warren v. Westbrook Mfg. Co., 29 A 927, 86 Me 32(1893). As owners of the reserved islands the Penobscot Nation enjoys no lesser right.

V

For the reasons set forth hereinabove, this Court concludes that it does have jurisdiction over both of the pending charged offenses and directs these matters be brought before this Court for further hearing and disposition as may be required as soon as practical.

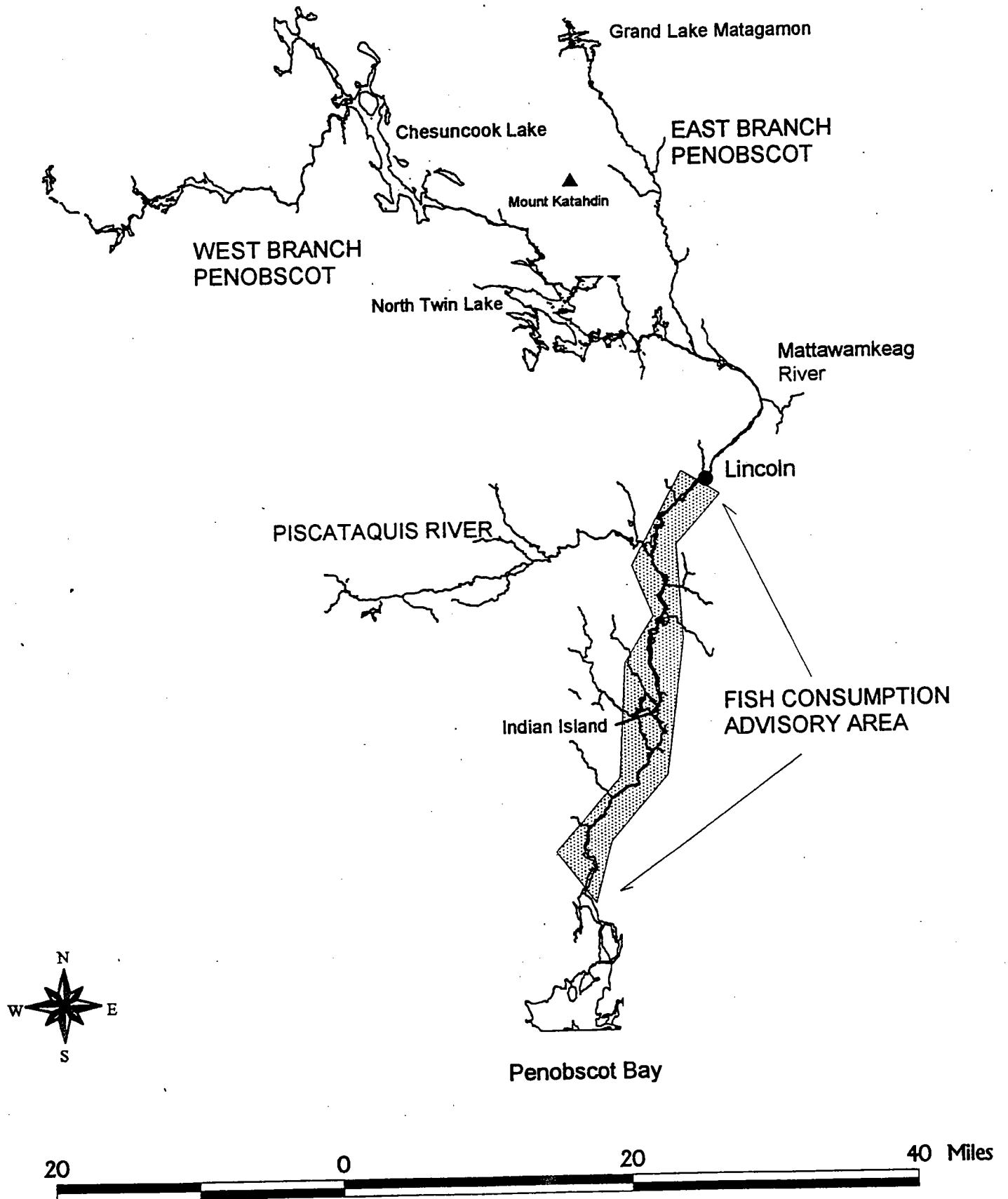
Dated: October 16, 1995



Gary M. Growe, Chief Judge

Exhibit 7

PENOBSCOT RIVER



ATTENTION FISHERMEN

**Fish caught in the Penobscot River below Lincoln—
may contain traces of dioxin, a chemical suspected of causing
cancer in humans.**

**For your health and safety when eating fish taken from these
waters, the following advisory should be observed:**

- 1. No more than two meals (eight ounces per meal) of fish taken from
this section should be eaten each month.**
- 2. Pregnant women and nursing mothers should avoid eating any fish
taken from this stretch of the river. Dioxin may affect the pregnancy
or be passed to infants through breast milk.**
- 3. When preparing fish, areas with the highest potential dioxin content
should be trimmed away. These include the skin, fat, belly meat, and
dark fat along the backbone and lateral line. Broil, bake or barbecue
fish on a rack so juices, which may contain dioxin-rich fats, will drip
off. Don't fry the fish.**

For further information contact:

Andrew Smith, Maine Department of Human Services, Tel. (207) 289-5378

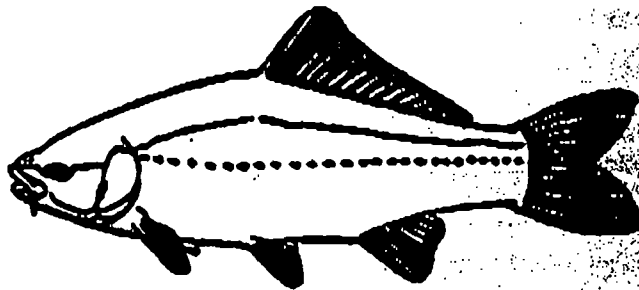
Barry Mower, Maine Department of Environmental Protection, Tel. (207) 289-3901

Dan Kusnierz, Penobscot Nation DNR, Tel. 827-7776 ext. 361

Clem Fay, Penobscot Nation DNR, Tel. 827-7776 ext. 361

**Commissioner of Inland
Fisheries and Wildlife**

FISH CONSUMPTION ADVISORY



Penobscot River

[Below Lincoln]

FISH CONSUMPTION SHOULD BE LIMITED

Due to PCB's and Dioxin Contamination

[PCB's and Dioxin cause cancer and reproductive disorders]

- 1-2 Meals per month [use lower limit for large fish]

Statewide

[Inland Waters]

Due to Mercury Contamination

[Mercury damages the nervous system]

- Pregnant, nursing, soon to become pregnant or less than 8 years old:
DO NOT EAT warm water fish [bass, suckers, perch, carp, etc.]
Only one meal a month of cold water fish [trout, salmon, smelt, etc.]
- General Public: 2-3 meals of warm water fish per month.

Consumption of lobster tomalley, striped bass and bluefish
limited in all waters.

This posting is a public service of the Maine Toxics Action Coalition [MTAC]. For a full copy of the State consumption advisories and more information on toxins in the environment call MTAC at 1-800-287-2345 or Maine Bureau of Health at 287-6455

Exhibit 8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES.

NPDES PERMIT NO.: ME0002003

NAME AND ADDRESS OF APPLICANT:

Lincoln Pulp & Paper Company, Inc.
Katahdin Avenue
Lincoln, ME 04457

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Lincoln Pulp & Paper Company, Inc.
Katahdin Avenue
Lincoln, ME 04457

RECEIVING WATER: Penobscot River and tributary to Penobscot River

CLASSIFICATION: Class C

I. Proposed Action and Type of Facility and Discharge Location.

Lincoln Pulp and Paper Company (LP&P) is engaged in the manufacture of kraft pulp, fine paper, and tissue. The company has applied to the U.S. Environmental Protection Agency for the reissuance of its NPDES permit to discharge treated process wastewater, non-contact cooling water and storm water runoff to the Penobscot River in Lincoln, Maine. The process wastewaters from pulp manufacturing receive secondary treatment and those from paper manufacturing receive primary treatment with both effluents combined prior to discharge.

The company has also requested that the solid waste leachate and storm water runoff discharge to the Penobscot River using the old, relocated Mattawancook Stream channel via Outfall 002 be permitted. This channel is classified as a tributary to the Penobscot River.

A draft permit modification for LP&P was put on public notice on February 10, 1989 for the purpose of adding dioxin and other limits and monitoring requirements. LP&P provided comments on this public notice but further action was not taken. EPA decided to seek reissuance of this permit, which expired on March 28, 1990 at a later date to integrate new and additional information which had become available.

On October 9, 1992 EPA proposed a draft permit and received comments from Lincoln Pulp and Paper, the Penobscot Indian Nation and the Environmental Defense Fund. Additionally, EPA entered into an informal consultation under the Endangered Species Act, pursuant to 50 C.F.R. §402.13, with the U.S. Fish and Wildlife Service (FWS), regarding the effect of this discharge on the eagles found to be nesting in the area. EPA has determined that LP&P's discharge would not adversely affect the bald eagles nesting in this area. EPA is now re-proposing another draft of this permit to account for new information provided by the comments to the first draft and the informal consultation with FWS.

II. Description of Discharge.

Quantitative description of the discharge in terms of significant effluent parameters based on the permit application and recent effluent-monitoring data (January 1991 through December 1992) along with other monitoring data are shown in Attachments A, B and C.

III. Limitations and Conditions.

The effluent limitations of the draft permit and the monitoring and other requirements may be found in the draft permit.

IV. Permit Basis and Explanation of Effluent Limitation Derivation

Lincoln Pulp and Paper Company (LP&P) uses the kraft process to manufacture pulp, paper, and tissue products in Lincoln, Maine. The waste streams at the mill include pulp wastewaters, the paper process wastewaters, non-contact cooling and sanitary wastewaters. See Figure 1 for a schematic of the mill process and waste streams. An additional and currently unpermitted discharge consists of solid waste leachate and storm water runoff from a 71 acre landfill.

Process wastewater from the pulp manufacturing receives activated sludge treatment while the sludge is dewatered and landfilled. The paper manufacturing wastewater receives primary treatment before discharge together with the secondary treated pulp effluent to Outfall 001. The non-contact cooling water discharge to Mattanawcook Stream via Outfall 003 in the existing permit, was combined with the process wastewater on July 4, 1988. The Maine Department of Environmental Protection (DEP) issued a wastewater license on June 19, 1987 which acknowledged this transfer and allowed 2.3 MGD of thermal (non-contact cooling water) flow to the Penobscot River via Outfall 001. Therefore, the draft permit, at current production, allows 2.3 MGD of thermal flow. The Lincoln Sanitary District receives the mill's sanitary waste at about .0195 million gallons per day (MGD).

The previous Outfall 002 was eliminated prior to the issuance of the previous permit in 1985. New Outfall 002 (formerly Outfall 004), which discharges leachate, was omitted from the previous permit and is discussed below.

Two production increases and three process changes are planned by LP&P within the next five years according to the NPDES permit renewal application of November 6, 1989 and the State of Maine Wastewater Discharge License Application of February 23, 1990. Production of bleached kraft pulp by LP&P over three years (1987-1989) averaged 382 ADTPD (air dried tons per day) and this production is targeted to increase by 68 and 158 ADTPD. For convenience, these two production increases are referred to as production level 1 (450 ADTPD) and level 2 (540 ADTPD), respectively in the following discussion and in the draft permit. These production increases do not create a "new source" under 40 CFR 122.29, but rather are an expansion of an existing source. These production increases are summarized by paper/product type in Attachment D.

Of the 417 ADTPD produced in 1989, 33% of this pulp was sold as market pulp and the other 67% along with a small amount of purchased bleached softwood pulp, was utilized to produce 143 ADTPD of fine paper and 106 ADTPD of tissue. All of the production at LP&P falls under the Pulp, Paper & Paperboard Point Source Category, 40 CFR Part 430, of EPA's Effluent Guidelines and Standards. Each product is also listed by its subcategory.

See Figure 2 for a flow diagram of LP&P based on the step increase in production to 540 ADTPD. A schematic of the wastewater treatment facility at LP&P is shown in Figure 3. The operations include bar screening, wet wells, primary clarification, pulp clarification and pH neutralization with caustic soda or sulfuric acid. Further secondary treatment is provided by an extended aeration activated sludge basin and a secondary clarifier. The 15.3 million gallon capacity basin provides up to two days detention.

The Clean Water Act (CWA) requires that the effluent of point source discharges satisfy minimum treatment technology and receiving stream water quality requirements. EPA established minimum technology requirements for the pulp and paper industry in the form of effluent guidelines promulgated under 40 CFR 430. The guidelines specify the maximum mass (lbs per day) of biochemical oxygen demand (BOD) and total suspended solids (TSS) which can be allowed to be discharged per 1000 lbs of product produced. The maximum amount of BOD and TSS allowed varies for the different types of pulp and paper products as well as manufacturing methods.

Water quality requirements are determined according to state laws classifying the receiving waters into which wastewaters are discharged, and according to the state laws specifying standards for each classification. In addition to state water body classifications and standards, the DEP has established minimum technology requirements based on best professional judgement (BPJ) for the pulp and paper industry. The Federal CWA recognizes the state's right to establish minimum BPJ requirements provided such

requirements yield limits which are at least as stringent as the limits calculated according to EPA technology guidelines.

The Penobscot River at the point of the LP&P discharge is classified as a Class C waterbody by the DEP. Class C waters shall be of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, Section 403; and navigation; and as a habitat for fish and other aquatic life.

The DEP has an antidegradation policy which states that "Existing instream water uses and the level of water quality necessary to protect those existing uses shall be maintained and protected. Existing instream water uses are those uses which have actually occurred on or after November 28, 1975, in or on a waterbody whether or not the uses are included in the standard for classification of the particular waterbody."

Determinations of what constitutes an existing in-stream water use on a particular waterbody shall be made on a case-by-case basis by the DEP. In making this determination, the DEP shall consider designated uses for that waterbody and several other factors including: Aquatic, estuarine and marine life present in the waterbody; wildlife that utilize the waterbody; and habitat or plant life that is maintained by the waterbody.

The Maine DEP has conducted water quality modeling which has indicated that less than 5% of the remaining assimilative capacity of the Penobscot River for BOD, at its assigned classification, will be consumed as a result of the increased effluent loadings from the production increases up to 505 ADTPD. Thus, this discharge would comply with the Maine water quality antidegradation policy, as all the dissolved oxygen criteria are projected to be met. The "Penobscot River Basin Waste Load Allocation" was prepared by the DEP in January, 1991 using a mathematical model. The Waste Load Allocation (WLA) model evaluated the proposed 58% increase in BOD loading for LP&P under conditions of 7Q10 flow, and found that the predicted dissolved oxygen (D.O.) downstream would be lowered by 0.05 parts per million (ppm). At the 30Q10 flow, the model also projected that a minimal impact would occur for the 58% BOD increase in monthly average loading. The 30 day average D.O. is projected to be lowered by not more than 0.04 ppm, maintaining stream standards. This model used an upper production limit of 505 ADTPD, which was the upper limit provided by LP&P at the time. Modeling for the increase up to the 540 ADTPD has not been done, but it is believed that this additional production will have no measurable effect on dissolved oxygen.

(B)

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Effluent limits are included in the draft permit for these production schedules and are effective when the pertinent production level is achieved and sustained. The draft permit contains a requirement that the permittee notify EPA approximately thirty (30) days prior to achieving the next production level. LP&P plans to incrementally increase production until they approach the respective production levels noted and then they will request the associated increase in effluent limitations. Written approval from EPA authorizing the increased effluent limits is required before these effluent limits are applicable. Upon receipt of Lincoln's notification of increased production, EPA will act upon such notification within thirty (30) days and accept or deny such request in writing. The State of Maine has declared a fish consumption advisory on this stretch of the Penobscot River, due to the presence of dioxin in sampled fish, which constitutes a violation of water quality standards. A major consideration concerning allowance of higher effluent limits will be based on testing dioxin levels in fish tissue. EPA is prepared to reconsider allowance of the production increases if dioxin levels in fish tissue are found to increase.

FACILITY IMPROVEMENTS

Lincoln Pulp & Paper has plans underway for three process changes at the facility consisting of a Precipitated Calcium Carbonate Production (PCC) Plant, Multi-Fuel Boiler, and Solid Waste Landfill at Carpenter Ridge. The PCC plant is being built as part of the process change to an alkaline based paper. Process wastewater and the contact thermal water are the wastewater components from this plant which is tentatively scheduled for completion in 1992. The permittee reports in their State License Application (February 23, 1990) that analyses from a comparable plant in Erie, PA indicated the concentration of some metals exceeded the detection limit and all NPDES reportable acid/base/neutral extractable organic compounds were below detection limits. The Multi-fuel boiler came on line in 1991 from which wastewater flows to the paper mill sewer consist of non-contact cooling water and process water. The Company expects the resulting flow increases to be countered by reductions in the present boiler operations. The paper sewers will receive storm water runoff from the roof drains, foundation tiles, and paved areas. Expected peak runoff for the 25 year event was estimated at 1.1 MGD.

The new landfill at Carpenter Ridge is scheduled to receive the new boiler ash, treatment plant sludge, hardwood flume wastes, lime mud, and recausticizing wastes. Leachate will be collected and returned to the mill for secondary treatment in the pulp wastewater treatment plant, with a maximum flow estimated at 0.03 MGD. Another method of ash disposal is currently being considered which may forego the short-term need for this landfill.

In addition, a plan is under consideration to collect all the non-contact cooling water throughout the plant and discharge this water to the pulp mill effluent following the secondary clarifier.

CONTROL OF TOXICS - 304(1) STATUS

On February 1, 1989 the Maine DEP submitted a report to the Environmental Protection Agency (EPA) which listed water bodies not attaining state water quality standards due entirely or substantially to the point source discharge of toxic pollutants. This report is referred to as the 304(1) "short" list, prepared pursuant to section 304(1)(1)(B) of the CWA. The Penobscot River is one of the waterbodies on the 304(1) list due to the point source discharge from LP&P (a bleached kraft mill) and the concern over the presence in the discharge of 2,3,7,8 tetrachlorodibenzo-p-dioxin (dioxin).

A fourteen mile segment of the Penobscot was included on the 304(1) list based on the presence of dioxin in the effluent from Lincoln Pulp & Paper as shown in the results of the 104 mill study, and based on the fish consumption advisory in effect for the river. During the public comment period on Maine's proposed listing, LP&P objected to its inclusion on the list. The DEP retained the Penobscot River on the final 304(1) list based on the presence of dioxin in fish tissue and Lincoln's effluent. EPA approved Maine's 304(1) list on June 5, 1989.

Section 304(1) requires interim control strategies (ICSs) to be developed to reduce the level of toxic pollutants from listed sources sufficient to achieve water quality standards. EPA regulations provide that the NPDES permit serves as the ICS when EPA is the permit issuing authority. See 40 C.F.R. § 123.46(c). Section 304(1) requires an ICS to achieve applicable water quality standards as soon as possible but no later than three years after the ICS is established. For purposes of this schedule, EPA considers the ICS to be "established" on the date the final permit is issued. Hence, the draft permit specifies that the water quality based limits must be achieved no later than three years from the date of final permit issuance. The technical criteria that govern the ICS are the same as those for establishing water quality based effluent limits for any permit, and are set forth in 40 C.F.R. § 122.44(d).

OUTFALL 001 - TREATED PROCESS WASTEWATER - LIMITS DISCUSSION:

Flow

Flow is limited in the proposed permit to the 13.5 MGD daily maximum limit of the prior permit, but is expected to increase correspondingly with the expected production increases to 14.6 MGD

and 16.3 MGD, pending EPA and DEP approval at each increase. Outfall 001 also includes thermal flow which was originally discharged to Mattanawcook Stream via Outfall 003. The draft thermal flow limit is established at 2.3 MGD to reflect current production and the limit which DEP established in their 1987 license. With the two production increases, the thermal flow component of the discharge would increase to 2.5 MGD and 3.0 MGD, respectively. All effluent parameters, except for temperature, will be sampled for the process wastewater flow prior to mixing with the thermal flow before discharge.

BOD

BOD limits based upon the effluent limitations guidelines (ELG) in 40 CFR §430 are 6,510 lbs/day monthly average and 12,484 lbs/day daily maximum for current production of 410 ADTPD. These limits exceed the previous permit limits of 4,772 lbs/day monthly average and 9,176 lbs/day daily maximum which were based on a production of 338 ADTPD. The ELG limits for production level 1 are 7,153 lbs/day monthly average and 13,719 lbs/day daily maximum and for production level 2 are 8,117 lbs/day monthly average and 15,567 lbs/day daily maximum. Attachment E shows a BOD limit calculation based on level 2, or 540 ADTPD of production.

The calculations of the BOD limitations using the ELG and the three production schedules are given in Attachment F. Alongside these ELG limits are the limits proposed by the DEP as a result of its statistical "goodness of fit" analysis. This analysis was conducted by the DEP on LP&P's BOD and TSS data for the period 1988-1990. Since the purpose of this study was to evaluate demonstrated performance capabilities during periods when the treatment plant was operating correctly, periods of abnormal facility operation were removed from the data set. These abnormal conditions amounted to 208 days for BOD data and 161 days for the TSS data.

The "goodness of fit" analysis resulted in the derivation of the limits based upon existing production of 404 ADTPD and were then adjusted upwards by 1.5% to reflect the increase in production to 410 ADTPD. The first increase to Level 1 production will result in influent loadings to the treatment plant which are 8% greater than the existing production levels. Therefore, the BOD and TSS limits consistent with Level 1 production are 8% greater than the limits for the existing production. The second increase to Level 2 production will result in influent loadings to the treatment plant which are 30% greater than at existing levels.

Since the DEP proposed limits are more stringent than the ELG limits and because they will be a Certification requirement for the State of Maine, they have been established as the draft permit limits. These limits are subject to change as the DEP may re-

evaluate its goodness of fit analysis.

TSS

The TSS limits of 12,920 lbs/day monthly average and 24,059 lbs/day daily maximum for current production are based upon ELG calculations from 40 CFR §430. These limits exceed the previous permit limits of 9,670 lbs/day monthly average and 17,922 lbs/day daily maximum because of an increase in production. The effluent limits for production level 1 are 14,242 lbs/day monthly average and 26,512 lbs/day daily maximum and for production level 2 are 16,098 lbs/day monthly average and 29,980 lbs/day daily maximum. TSS limits are also shown in Attachment F. Similarly for the TSS limits as for the BOD limits, the more stringent DEP limits have been established with the expectation that these limits will be a State Certification requirement.

Zinc

The current permit has a maximum daily limit for zinc of 20 lbs/day where it was a state certification requirement for the protection of water quality. The average zinc mass reported in the DMRs over the past five years has been about 8 lbs/day with a high of 27 lbs/day. It is EPA's opinion that it is unlikely that zinc in the effluent would cause or contribute to a violation of water quality standards. Therefore, the permit limit has been deleted, but the monitoring frequency has been retained and changed from monthly to quarterly in order to assure that zinc is not discharged at levels which would cause or contribute to water quality standards violations. However, whole effluent toxicity testing has been established which will account for any synergistic effects which zinc, in combination with other metals and chemicals, could pose. Attachment G shows the water quality based calculation for zinc.

Copper

Quarterly monitoring for total copper is proposed due to a concentration of 40 ug/l present in the permit application. There is not enough data with which to ascertain whether effluent copper levels may cause or contribute to a water quality violation, that is why a monitoring requirement has been established rather than an effluent limit. Attachment H shows the various dilution ratios calculated from the different flow rates.

Pentachlorophenol

A quarterly monitoring requirement has been established for pentachlorophenol to address its detection of 17 ug/l in the permit

application. Three samples subsequent to the application information all yielded non-detectable (below 50 ug/l) results. Although LP&P does not use pentachlorophenol, it may be introduced through purchased raw materials or may have been a detection error. Regardless of pentachlorophenol's origin, LP&P is responsible for the amount discharged from its outfalls. A testing method with a minimum detection limit of 10 ug/l will be used.

After sufficient toxicity testing data and monitoring data for the above parameters has been collected, Lincoln Pulp & Paper may request a reduction in frequency or elimination of such testing. Continued monitoring for these parameters may be useful in determining any water quality or toxicity related problems in the Penobscot River.

2378-TCDD (Dioxin)

During the past 20 years, many studies have described the toxic effects of 2378-TCDD (2,3,7,8 tetrachlorodibenzo-p-dioxin). Although many questions remain to be answered, data show that 2378-TCDD produces a variety of toxic effects, including cancer and reproductive effects, in laboratory animals at very low doses. For risk assessment purposes, EPA classifies 2378-TCDD as a carcinogen with a potency of 1.6×10^5 (mg/kg/day)⁻¹. The chemical is a reproductive toxin with a Reference Dose of 1 pg/kg-day. 2378-TCDD is just one of a family of 210 structurally related chlorinated dibenzo-p-dioxins and dibenzofurans. Much less is known about the toxicity of the other 209 congeners, but available information shows cause for concern. Relative potency factors have been developed for many of the congeners, the highest of which is 2378-TCDF (2,3,7,8 tetrachloro-dibenzo-furan) at 0.1 or one tenth the potency of 2378-TCDD.

The permit proposes interim and final limits for 2378-TCDD and a continuous limit of 200 ppq for 2378-TCDF. The interim maximum daily limit of 20 ppq for TCDD is a technology based BPJ (Best Professional Judgment) BAT limit which would be effective upon permit issuance and extend for three years after permit issuance. BPJ is allowed pursuant to 40 CFR §122.44(a) and §402 (a)(1)(B) of the CWA. The final maximum daily limit of 109 ug/day for TCDD is a water quality based limit which becomes effective three years after permit issuance. All monitoring is proposed at once per month during the first two months of each calendar quarter. Current methods of analysis cannot reliably quantify detected values below a minimum level (ML) of detection of 10 ppq. This means that the true concentration of a detected result below 10 ppq is statistically uncertain. For example, a detected analytical result of 5.3 ppq would suggest that the compound is very likely to be present but that the actual concentration present could be anywhere from 9.9 ppq to perhaps .01 ppq. Therefore, for purposes of enforcement, reported values of non-detect and reported values

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of detect at and below 10 ppq will be deemed in compliance with the permit. Any reported value of 20 ppq or greater will be a violation of the interim limit.

A non-detect result for an analysis which yielded an ML of greater than 10 ppq, is considered to be unacceptable monitoring event. EPA Analytical Method 1613 or equivalent, such as NCASI 551, is specified for analysis.

Maximum daily limits are proposed in both interim and final limits as opposed to monthly average limits, in order to eliminate the problem of mathematically averaging detects below the minimum level of detection and of averaging non-detects.

Interim BPJ Dioxin Limit

The interim 2378-TCDD maximum daily limit of 20 ppq has been established by EPA Region I as a BPJ (best professional judgement) BAT (best available technology economically achievable) limit. Thus, the Region is proposing that this limit is achievable with the presently available process and treatment technology at Lincoln Pulp & Paper. During the 1988-89 EPA/Paper Industry Cooperative Dioxin Study, the LP&P effluent was found to contain 32 ppq of 2378-TCDD and 130 ppq of 2378-TCDF. Analytical results for effluent, sludge, pulp, and for Penobscot River fish samples are given in Attachment C. No additional effluent data has been made available to EPA nor have any process modifications to minimize dioxin formation been reported to the Region.

In reaching its BPJ determination, the Region considered the age of equipment and facilities involved, the processes employed, the engineering aspects of the application of various types of control techniques, process changes, and non-water quality environmental impacts. The proposed BPJ BAT limit is also believed to be consistent with information presented in the October 1988 EPA Preliminary Report "USEPA Bench Scale Wastewater Treatability Study - Pulp and Paper Mill Discharges of 2378-TCDD and 2378-TCDF" prepared by EPA Region V.

A corresponding mass limit of 1.0 mg/day maximum daily has been added to the permit based upon the 20 ppq and for a flow rate of 13.5 MGD as shown in the calculations in Attachment I.

Final Water Quality Based Dioxin Limits

Pursuant to Section 301(b)(1)(C) of the CWA, the permit proposes a final water quality based maximum daily limit of 109 ug/day. This mass limit is calculated based upon the water quality criterion of 0.0078 ppq TCDD at a harmonic mean river flow for the Penobscot River at Lincoln of 5693 cfs as seen in Attachment I. EPA set this

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* limit based on the water quality criterion necessary to protect human health, because it was more stringent than the water quality criterion necessary to protect aquatic life and wildlife as discussed below. The draft permit has set an final dioxin limit based on the fish consumption rates of the Penobscot Indians who have historically fished and eaten from the Penobscot River. EPA has used data from the "1991 Penobscot River Users Survey" conducted by the Penobscot Indian Nation's Department of Natural Resources to establish this limit. The final limit will be in effect three years following the date of permit issuance.

Maine L.D. No. 918 allows for flexibility in using river flow conditions for human health protection. EPA herein proposes to use the long term harmonic mean river flow rate for establishing the 2378-TCDD limit. Use of the harmonic mean is consistent with EPA's 1991 revised Technical Support Document for Water Quality Based Toxics Control. Also, the agency has used harmonic mean flow as a basis for estimating risk associated with a chlorine bleaching wood pulp plant in response to the 1988 Consent Decree in Environmental Defense Fund and National Wildlife Federation v. Thomas, No. 85-0973.

Human Health:

In setting a water quality-based dioxin limit to protect human health, EPA seeks to apply the criterion for dioxin that Maine has adopted so as to ensure protection of human health, including the health of members of the Penobscot Nation who consume relatively large quantities of fish from this river.

Maine's Dioxin Criterion

There are four key elements used in developing a criterion for dioxin: cancer potency; bioconcentration; exposure; and risk level. EPA developed a criteria document for dioxin under section 304(a) of the CWA that established values for the first three factors, and that presented criteria based on a range of cancer risk levels (from 10-5 to 10-7, or one additional cancer case in every 100,000 people to 10,000,000 people). Ambient Water Quality Criteria for 2,3,7,8, - Tetrachlorodibenzo-p-dioxin, EPA 440/5-84-007 (Feb. 1984) at C-181. At a risk level of 10-6, EPA's recommended ambient instream criterion is 0.013 ppq.

In 1990, Maine amended 38 MRSA section 420 to require that EPA's national criterion for dioxin would apply in Maine if the Board of Environmental Protection failed to adopt its own numeric criterion by June 1, 1991. The statute did not specify a risk level for the dioxin criterion. The Board did not adopt a criterion, nor did it select a risk level. In May 1993, Maine again amended section 420, this time to prohibit the Board from adopting any criterion or

setting a risk level prior to January 1, 1994. EPA interprets section 420 to mean that EPA's 1984 criterion remains in effect in Maine, and the Board is prevented prior to January 1, 1994 from either displacing the national criterion with its own or setting a risk level under the national criterion. Because no risk level has been established by Maine, EPA may assess risks to human health on a case-by-case basis and select the risk level corresponding to its national criterion that will be protective of human health in the case at hand.

Penobscot Nation Fish Consumption

* EPA has examined data from the "1991 Penobscot River Users Survey" conducted by the Penobscot Indian Nation's Department of Natural Resources. In this report, the 50th percentile of the tribal members consuming fish consumed "less than one" fish meal per month, and the fish meal size for these consumers ranged from 224 to 336 grams. Assuming a 336 gram fish per meal and one fish meal per month, this corresponds to an average daily fish consumption of about 11 grams, or nearly twice the national average fish consumption rate (6.5g/day) assumed in deriving EPA's criterion. Moreover, the 95th percentile tribal members consuming fish in this study consumed an average of three fish meals per week, or 144 g/day, based on a fish meal size for these consumers of 336 grams. The 99th percentile tribal member consumed one fish meal per day, or 336g/day based on a fish meal size of 336 grams for these consumers. EPA has no information and has received no comments on the prior proposed permit to suggest that there are other individuals who consume more fish from the Penobscot River than the Penobscot Tribe. EPA believes that protection of the Penobscots from dioxin discharges to the River will also ensure protection of the general human population.

Selecting a Risk Level for the Maine Criterion

Under the CWA, EPA has approved state water quality criteria for priority toxic pollutants that are regulated as carcinogens based on risk levels ranging from 10^{-4} to 10^{-6} . For dioxin, EPA has approved human health criteria representing a range of risk from 1×10^{-4} to 4×10^{-8} , assuming that one uses the values in EPA's national criterion for the other inputs for the criterion. States are also free to use more protective risk levels in establishing dioxin criteria. Generally, EPA has left it to the states to select a risk level from within an acceptable range to implement a dioxin criterion for human health. But in the case of dioxin, Maine has declined to select a risk level. EPA understands that, in declining to select a risk level, Maine was simply deferring a decision pending the outcome of EPA's reassessment of the dioxin human health criterion. Maine was not necessarily rejecting any particular risk level. Additionally, EPA has no indication from

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Maine about how the State would address the risks posed to highly exposed subpopulations, such as the Penobscots.

* Without specific guidance from the State, EPA has selected a risk level for application of its national criterion that will provide the following levels of protection to the general population and the Penobscots:

Level of Fish Consumption (g/day and percentile of the population)	Risk of Additional Cancer Cases
6.5 g/day (50th percentile of United States population)	6×10^{-7}
11 g/day (50th percentile of Penobscots consuming fish)	1×10^{-6}
144 g/day (95th percentile of Penobscots consuming fish)	1.26×10^{-5}
336 g/day (99th percentile of Penobscots consuming fish)	2.92×10^{-5}

Risks in this range are within the acceptable bounds of risk EPA has authorized under the CWA. The instream criterion derived from these risk levels is 0.0078 ppq, roughly half the dioxin concentration allowed under EPA's national criterion (at a 10⁻⁶ risk level) on which EPA based the proposed limits in the first draft for this permit. This criterion yields a permit limit of 109 ug/day, as described in Attachment I.

EPA understands that the Penobscots are concerned that the current fish consumption in the Tribe may be suppressed as compared with historical fish consumption practices, because of the fish advisory Maine has issued for the Penobscot River. Therefore, there is the possibility that the Tribe's data concerning their present fish consumption does not adequately represent the consumption levels of the Tribe, if the River were unimpaired by dioxin discharges. EPA has no reliable data documenting historical fish consumption practices among the Tribe's members. In the face of this uncertainty, EPA believes it is reasonable to choose a range of risk that provides an adequate margin of safety.

Moreover, there are assumptions EPA has made in deriving these risk levels that are conservative. These conservative assumptions provide further for a margin of safety. First, EPA assumed in deriving its national criterion that all of the 6.5 grams of fish which EPA assumed would be consumed per day by the general population would contain the maximum residues of dioxin expected to

be present in fish after implementing the criterion. This is a conservative assumption, that all the fish caught and consumed have lived in waterbodies with dioxin concentrations equal to the criterion for sufficiently long periods so that there is no longer any net movement over time of dioxin from the ambient waters into fish tissue. There is insufficient information available to EPA to assess whether the fish consumed by the Penobscot Tribe are likely to bear the maximum residues of dioxin that can be estimated to occur in fish through implementation of the state criterion. In the absence of specific information, EPA believes that it is prudent to assume that the fish will contain such maximum residues. Second, EPA assumed that the 50th percentile consumer of fish in the Penobscot Tribe consumed one whole fish per month and that the fish is the largest size in the range documented in the Penobscots' survey.

Aquatic Life and Wildlife:

Although there are no state or federal criteria for dioxin for the protection of sensitive species of wildlife and aquatic organisms, the U.S. Fish and Wildlife Service (USFWS) has noted that an instream concentration of 10 ppq should not be exceeded. Using an instream concentration of 10 ppq and a river flow of 2580 cfs at Lincoln, an allowed release of 63,000 ug/day of 2378-TCDD would be calculated. Hence, the federal/state criteria for protection of human health are far more restrictive than the USFW suggested criteria for protection of aquatic life from dioxin.

The Proposed Rules for the "Water Quality Guidance for the Great Lakes System" and the "Water Quality Guidance for the Great Lakes System; Correction" (Federal Register - Vol. 58, #72, April 16, 1993) suggest a dioxin concentration of 0.0096 ppq as a protective value for bald eagles. EPA believes that the assumptions made in the calculations for eagles along the Great Lakes are valid for eagles along the Penobscot River. Thus, EPA believes that the value of 0.0078 ppq in the draft permit is protective of the bald eagle and its critical habitat. Moreover, EPA believes that this limit is adequate to protect other species in the area of the mill, such as the loon, osprey, merganser, and great blue heron. In the event that EPA re-evaluates the 0.0078 ppq value for the purposes of protecting human health, EPA will rely on the recommendations of the Great Lakes Study as well as other relevant evidence of dioxin's effects on wildlife to evaluate a limit that will assure that this permit will not adversely affect the bald eagle,

Exhibit 9



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

June 10, 1998

David Courtemanch
Bureau of Land and Water Quality
Department of Environmental Protection
#17 State House Station
Augusta, ME 04333-0017

RE: ME DEP 1998 §303(d) List

DAVE
Dear Mr. Courtemanch:

In response to Lincoln Pulp & Paper's May 26, 1998 letter stating concerns about retaining the listing of the Penobscot River below Lincoln on Maine's 1998 §303(d) list, we offer the following reaffirmation of EPA's position that removal of that section of the river is premature

First, we take issue with Lincoln Pulp and Paper's assertion that §303(d) authorizes listing only for conventional pollutants. EPA's regulations clearly require listing where technology-based effluent limits required by §301(b), §306, and §307 are not sufficient to achieve water quality standards. See 40 CFR §130.7(b)(1)(i).

Second, EPA recognizes the great strides in protection of water quality and human health Maine has taken in adopting the dioxin legislation on June 10, 1997 (38 MRSA §420). We also recognize the strong efforts by Lincoln Pulp & Paper to comply with the new law and stringent new dioxin limits in its discharge license.

Third, EPA disagrees that the listing is no longer necessary or appropriate. According to current EPA regulations and policy (see EPA's 1994 and 1998 listing guidance documents), in the absence of an approved TMDL, a water could be delisted if enforceable controls were established that would require compliance with water quality standards *within two years*. While significant improvement in dioxin levels can be expected in the next two years, and we understand that the facility is already attaining nondetect at the bleach plant for dioxin and furan, we are not assured that water quality standards will be met, as evidenced by the lifting of fish advisories, until sometime after December 31, 2002 (the statutory deadline for no discharge of dioxin to receiving waters as measured by fish tissue sampled above and below the mill's wastewater outfall). Since the ME DEP does not anticipate being in a position to lift the fish consumption advisory within the next two years, this section of the Penobscot River below Lincoln needs to remain on the 1998 §303(d) list.



PRINTED ON RECYCLED PAPER

Please call me if you would like to discuss this issue.

Sincerely,



Stephen J. Silva
Manager, Maine State Program

cc: Edward O. Sullivan, ME DEP
Martha Kirkpatrick, ME DEP
Dennis McComb, Lincoln Pulp & Paper
Mark Voorhees, EPA
Ann Williams, EPA

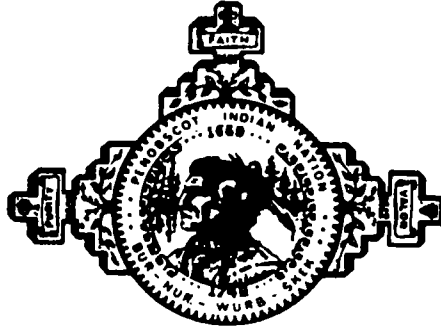
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Exhibit 10

Office of the Chief and Council
Richard H. Hamilton
Chief

Ann I. Pardilla
Sub-Chief

Donna M. Loring
Representative



Community Building
Indian Island, Maine 04468
(207) 827-7776

FAX (207) 827-6042

RESOLUTION

Number: 02-22-00-07
of the Governing Body
of the Penobscot Nation
Tribal Council

WHEREAS, the Penobscot Nation is a federally-recognized sovereign Indian tribe with inherent powers of self-government, exercised through its Chief and Tribal Council; and

WHEREAS, the Penobscot River watershed is the aboriginal home of the Penobscot Nation; and

WHEREAS, the Penobscot River watershed contains sites of unique historic, cultural, and spiritual significance to the Penobscot Nation; and

WHEREAS, pollution discharges into the Penobscot River watershed affect sites of unique historic, cultural, and spiritual significance to the Penobscot Nation, including Matna'gak (also known as "Lincoln Island") near Lincoln, Maine, which is the historic site of one of the Penobscot Nation's permanent villages and fishing sites.

NOW THEREFORE BE IT RESOLVED THAT:

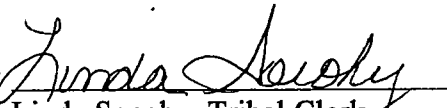
1. The Penobscot River watershed is of unique historical, cultural, and spiritual significance to the Penobscot Nation.
2. Pollution discharges into the Penobscot River watershed inevitably effect sites of unique historical, cultural, and spiritual significance to the Penobscot Nation.

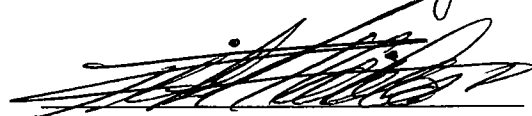
CERTIFICATION

I, the undersigned as Clerk of the Tribal Council of the Penobscot Indian Nation, do hereby certify that the Tribal Council of the Penobscot Indian Nation is composed of twelve (12) members, of whom 10 were present at a meeting held at Indian Island on the 22nd day of February, 2000, held in accordance with the schedule of regular meetings of the Council of which all Council members received notice more than twenty-four hours in advance, and at which the Chief was present and presided, and that the foregoing Resolution was duly adopted by the affirmative vote of 10 Council members.

Dated: 2-23-00

ATTEST:


Linda Socoby, Tribal Clerk


Richard Hamilton, Chief
Penobscot Indian Nation

